

MDRC/MDC C-6 Facility Closure Phase 1

Torrance, California

Presented To:

MCDONNELL DOUGLAS REALTY COMPANY
4060 Lakewood Boulevard
Building # 801, Sixth Floor
Long Beach, California 90808

Presented By:

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January 1996

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AMAN ENVIRONMENTAL CONSTRUCTION, INC.
REMEDICATION AND DEMOLITION CONTRACTORS

January 22, 1996

Mr. S. Mario Stavale
MCDONNELL DOUGLAS REALTY COMPANY
4060 Lakewood Boulevard
Building #801, Sixth Floor
Long Beach, California 90808

SUBJECT: SUBMITTAL OF PROPOSAL

REF: MDRC/MDC TORRANCE C-6 FACILITY

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Dear Mr. Stavale:

Aman Environmental Construction, Inc. (AECI) is pleased to submit to McDonnell Douglas Corporation our proposal to perform decontamination and demolition services at the C-6 Facility located in Torrance, California.

Should you have any questions, or require further information, please advise.

Respectfully submitted,
AMAN ENVIRONMENTAL CONSTRUCTION, INC.

Steve M. Aman, P.E.
President

PROPOSAL

McDonnell Douglas Realty Company / McDonnell Douglas Company

Phase 1 Demolition Services of the C-6 Facility

Torrance, California

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INTRODUCTION

This document outlines the proposed scope of services to be performed by **Aman Environmental Construction, Inc. (AECI)** for the McDonnell Douglas Corporation (MDC) Project. This is an unsolicited bid proposing the decontamination and demolition of the C-6 Torrance Facility using standard industry practices. **AECI** has performed numerous projects of this size and scope and feel particularly well suited to work with the MDC team to complete all environmental and demolition services. This proposal is to act as a guide to the services which can be provided on this project. Should MDC wish to incorporate other services, **AECI** is confident that we can meet and exceed the needs and expectations of the project.

AECI is a wholly-owned subsidiary of Dames & Moore, and as such can provide MDC with a team of highly experienced professionals and unlimited resources to tackle any environmental or demolition. Because of our relationship and diverse expertise in these fields, **AECI** often only needs to use a minimal amount of subcontractors. This streamlined team reduces the potential for miscommunication experienced when a prime contractor must coordinate the activities of several specialized and independent subcontractors. In addition, the extensive experience possessed by **AECI** (working together) provides further assurance to MDC that the project budget and timelines will be met.

The objective of **AECI** is to meet or exceed the requirements of MDC. This proposal is based on our visual take-off of work to be completed, and the partial as-built drawings provided. Costing can be modified as the scope of work is better defined.

In addition, there is a potential savings that can be appreciated if crushed materials can be sold for use offsite rather than used as fill material as described in the following proposal.

SECTION 1.0

TECHNICAL APPROACH

SECTION 1.0 TECHNICAL APPROACH

AECI's understanding of the project is based on our attendance to the pre-proposal site tours, site visits, conversations with MDC Representatives and **AECI** team member past experience in working on projects similar in size and scope.

The success of this project will require attention to several principle factors, in particular, the Technical Approach. The following subsections detail **AECI's** approach to this very important project including: abatement procedures, environmental cleanup, demolition sequencing, waste management, project scheduling, and health & safety issues.

SECTION 1.1

ASBESTOS CONTAINING MATERIALS

1.1 ABATEMENT SCOPE OF SERVICES

LVI has included the removal, proper handling and disposal of the specified ACM materials within the designated areas which were visible and easily accessible during the MDC site walk. LVI has not included materials which are concealed, unspecified or inaccessible for quantification.

LVI acknowledges that the intent of this work is to remove all specified ACM to facilitate the renovation of the MDC complex, but does not accept responsibility for ACM materials not indicated or specified within the bidding documents outside the designated areas.

The following is a general overview of procedures to be followed for asbestos materials possibly encountered.

☐ CONTAINMENT PROCEDURES

The sprayed on Fire Proofing Material will be removed utilizing standard controlled wet methods.

Standard containment procedures in compliance with industry standard and regulatory procedures will be used throughout the abatement process. The work area will be isolated with double layers of .6 mil poly on the floors and a single layer of .6 mil on the walls. Openings will be sealed off with critical barriers and a wet decontamination station will be constructed at the work area. Engineering controls will be installed including, but not limited to, air filtration devices (AFDs). This material is a friable sprayed applied material and will require adequate wetting prior to removal. All vertical and horizontal surfaces will be protected during this work. At the completion of the removal and cleaning of the substrate, the poly sheeting will be visually cleared and final air clearances conducted and passed via NIOSH 7400 criteria for PCM analysis prior to the containment being torn down. Workers will be equipped with PAPR respiratory protection.

☐ VAT AND MASTIC

Critical barriers will be installed at openings to the work area. Air flow through the work area will be created by means of placing portable AFDs at strategic locations. Entry to the work area will be through decon units. Double suiting procedures will be used with half-face respiratory protection. The tiles will be removed using specifically designed powered tile chippers while workers continuously mist the area and wet the tiles as a preventative to airborne fibers. The waste generated from this work will be double bagged for proper disposal. Movable objects will be removed as needed to access the floor tile. These movable objects will be stacked in a vacant portion of the building for disposal by the demolition crews.

Impeding objects such as demountable wall partitions and full height walls will be removed prior to the abatement activity. These items will be placed in an area of the floor designated for storage by the demolition crews for removal at a later time.

☐ TSI

Cut and wrap removal procedures and glove-bag procedures will be employed for the abatement of this material. The work area will be demarcated with barrier tape. Ladders, manlifts and in some cases scaffolds will be used to gain access to the piping where necessary. Approximately every 10 LF, a small section of insulation will be removed using glove bag removal procedures. Fittings will also be abated using glove-bag removal procedures. Once the two ends of a section of pipe have been abated, the pipe itself will be double wrapped in poly sheeting in preparation for lowering to the floor area. The workers will then cut the section of pipe and will lower the section with the aide of the lift/and or come-a-long. All non-asbestos insulation will be left in place for the demolition crews. Localized area air filtration will be utilized along with critical barriers and a decon facility. Drop cloths will be placed below the immediate work area.

☐ ROOFING MATERIAL

This material has been applied to the roof substrate as a weather protectant and will be removed utilizing a combination of power equipped and manual methods. Properly wrapped and labeled material will be placed into containers for removal from the roof area and lowered to ground via chute.

Open air removal techniques will be employed. Access to the work area will be restricted, and openings to the floors below will be sealed by the installation of critical barriers.

Building components identified as being coated with the asbestos weather protectant will be removed from their mountings and disposed of as asbestos waste. Drop cloths will be placed below the immediate work areas and workers will continually HEPA vacuum up any loose visible debris.

☐ ASBESTOS CONTAINING DUCT TAPE AND VIBRATION ISOLATORS

Abatement of this material will take place in conjunction with the removal of the roofing system and pipe insulation. The duct work will be placed on the ground for the abatement of the asbestos containing duct tape material. At the completion of removal activities, the duct work will be left in place for removal by the demolition crews.

SECTION 1.2

HAZARDOUS MATERIALS

1.2 HAZARDOUS MATERIALS

The following scope of services is a general overview of tasks which may be required for MDC's Phase 1 project. Not all the services set forth in this scope have been included in the bid estimate.

1.2.1 SINKS, DRAINS, AND SEWERS

☐ SINK CLEANING

Sink surfaces will be cleaned by scrubbing and removal of residual matter from the designated facility sinks. Cleaning will be performed using a non-phosphate, non-toxic detergent (Alconox or equivalent) as the cleaning agent. The detergent will be placed onto the sink surface and scrubbed with a rag and/or brush for up to two (2) minutes. Upon completion of the sink cleaning, the sink will then be flushed of any residual detergent with water, swabbed and allowed to dry. Wash water or rinseate generated during the cleaning activities will be allowed to drain into the existing sanitary sewer as specified. After the sink has dried, it will be marked with a non-toxic/non-lead/non-toluene marking paint to indicate that cleaning of that specific sink has been completed. This protocol will be utilized for specific sinks and drains associated with former laboratory operations.

☐ SEWER CLEANING

Sanitary sewer drains will be accessed at points or cleanouts down line from the sink or toilet configurations. The clean-out will be located, the port grate will be removed, the access point will be cleared of any debris, and a pressurized jetting device will be introduced into the lateral line. This device will proceed to the main sewer line, which will later be cleaned. The pressurized jetting device has a 360 degree rotating head with multiple jetting ports. The cleaning system reaches a constant pressure of 3,000 psi and an operating temperature ranging between 150-200 degrees Fahrenheit. It is AECI's experience that one pass through the sanitary sewer system utilizing this pressure cleaning technique removes debris and/or oily wastes. Any wash water or rinseate generated during decontamination activities will be allowed to drain into the existing sanitary sewer.

Upon completion of the interior sewer cleaning, the access ports will be marked with a non-toxic/non-lead/non-toluene marking paint to indicate that steam cleaning of that specific location has been completed. Once the sewer laterals have been cleaned, AECI will proceed to cleaning the main lines to which the laterals connect. AECI will then complete the sewer cleaning inside and outside of the specified building.

1.2.2 DECONTAMINATION PROTOCOL

❑ BUILDING CONTROL EQUIPMENT REMOVAL

Throughout the facility there is equipment that may require special handling considerations prior to demolition. This equipment may consist of air compressors, chillers, boilers, etc. The control equipment to be removed will be located, identified, isolated, and cleared of debris. The piece of equipment to be removed from service will be disconnected from electrical, sewer, water and/or gas systems. Severance of the utility connections will proceed utilizing safety and standard removal procedures for the specific item. All related operation lines to the specific item will be traced from origin to destination and disconnected (if applicable). Free fluids will be removed (pumped or absorbed) and containerized prior to removal for later characterization.

The equipment will then be drained of oil or operating fluids. Oils will be drained into an oil pan or 5-gallon spill proof container and then contained in a 55-gallon 17H D.O.T approved drum and labeled "Waste Oil". Personnel may utilize mechanical (metal or plastic) hand pumps to facilitate oil removal. If used, hand pumps will pump the oil directly into a spill proof container. Drum(s) will be located adjacent to the work area during oil transfer to reduce spillage. Containers will be sealed prior to being moved or transported. Absorbent and spill containment booms will be available on-site during oil removal and transfer as a contingency in case of spillage. Used absorbent will be placed in a drum labeled "Oily Absorbent" or incorporated into an existing oily absorbent waste stream generated from general facility decontamination.

At the end of the work day, the contained oil will be transported to the designated temporary waste storage and processing area. Moving any containerized fluid will require that all spill proof containers be sealed to ensure no fluid leakage. Drums will be handled with a drum grabber or fork attachment during transportation throughout the facility. If containers require transfer via lifts, the container will be chained to the lift basket and secured to prevent the container from overturning.

Each piece of equipment shall be tagged indicating "Fluids Removed" after the fluids have been removed, and released for salvage or resale. AECI will maintain a list of equipment sold and possibly denoted on the "as-built" set of drawings at the Field Office indicating those items which have been drained and/or removed.

Compatible waste streams will be consolidated and those drums will be reused. An inventory sheet will be forwarded to MDC on a biweekly basis those for those wastes stored in the temporary waste storage area.

Workers that are required to remove building control equipment and/or containerized fluids from roofs or second story locations, will utilize scaffolding or motorized lifts to assist in the handling of these items. Precautionary procedures will be discussed prior to implementing removal activities. These measures will be outlined by the Task Supervisor and will include both operational and health and safety issues. The procedures for working on scaffolding are outlined in Section 1.7 of this proposal and will be detailed in the Site-Specific Health & Safety Plan.

❑ REMOVAL OF CFCs FROM EQUIPMENT

The specific item containing CFCs (i.e. air conditioning units and chillers) will be located and accessed for CFC removal. The CFC containing equipment will be disconnected utilizing the project safety and standard removal procedures. Air conditioners and chillers will be disconnected from power sources. This severance of utility lines includes, but is not limited to, electrical, sewer, water and gas (if applicable).

The access service valve(s) will be located for mating with the CFC evacuation system unit. **AECI** will provide a portable Air Conditioning Refrigerant Recovery Unit (ACRR) to facilitate evacuation of the CFCs associated with HVAC units. The removal of the CFCs will be performed by accessing the HVAC service valve and connecting a manifold or gauge to the low side and high side of the HVAC system. The connected ACRR unit will draw refrigerant through the intake filter and evaporator. Passing through the evaporator, the refrigerant and/or vapor enters the oil separator. Refrigerant then travels to the compressor and finally to the condenser. Once inside the condenser, the refrigerant is condensed into a liquid and pumped into the certified tank. The tank is protected against overfilling by a float switch which is located within the condenser unit. Compressor oil which is accumulated during CFC removal will be containerized in 5-gallon plastic spill-proof containers labeled "HVAC compressor oil" and at the end of each work day the accumulated oil will be consolidated in a DOT approved 55-gallon 17H steel drum for off-site recycling.

Workers removing CFCs from units located on roofs, or aboveground, will utilize scaffolding or motorized lifts to assist in handling the ACRR unit, the removal of the CFCs, and the handling of empty and/or full cylinders. During handling of these tanks with motorized lifts, tanks will be chained to the lift basket and secured to prevent tanks from dropping. Cal-OSHA required fall protection procedures will be utilized pursuant to the project.

Prior to shipment of any refrigerant cylinders, a sample label will be submitted to MDC for review. After being labeled, the tank will be transported to the temporary waste storage and processing area for temporary storage. All drummed compressor oil will also be relocated to the temporary waste storage area. During temporary storage, cylinders will be secured by lock and chain to eliminate the chance for cylinder damage.

AECI will maintain an "as-built" set of drawings at the Field Office indicating those units which have been evacuated of CFCs. Although the current as-built do not indicate CFC units, **AECI** will document these units on the as-built drawings. **AECI** will also document on an internal waste removal log, the quantity of CFCs removed from each individual unit. Once the unit is cleared, the unit will be tagged with a red tag indicating "CFCs Removed".

☐ PIPING DECOMMISSIONING - WATER

The piping run(s) to be drained and removed will be located and marked to facilitate piping decommissioning. The specific piping unit will be severed and drained utilizing safety and standard removal procedures. **AECI** will disconnect and/or cap water supply lines and feed lines to isolate each building or group of buildings.

Capping of the water lines will be completed by one of the following methods. Utilizing existing utility drawings, the water valve which will render a particular area of concern non-operational will be located and identified. The valve will be shut by physically closing the gate valve. This operation could possibly take several hours due to excessive silts and residue that normally accumulate at these points. An alternative method is to install a fire plug into the line and bolt it to the line in a manner that effectively caps the subject line.

AECI will locate and drain lines within each building and once the main feed line is capped, the line will be accessed and allowed to drain directly into the nearest sanitary sewer access point. Draining the lines may require discharging to more than one sanitary sewer point within each building.

The fire sprinkler systems will be addressed in a manner similar to that described above. **AECI** will disconnect any related electrical and/or monitoring equipment that may be associated with the fire sprinkler systems, as well as irrigation systems as needed. The City of Torrance Fire Department will be notified not less than two (2) working days prior to disconnection of building related fire systems (main and sprinkler system) at the MDC facility. If in case of a fire, **AECI** will initiate the site specific contingency plan and utilize on-site equipment such as water trucks and bulldozers to facilitate fire suppression.

Upon completion of all draining and capping operations, all water lines (fire, irrigation and domestic) will be left in place for removal during the general demolition. **AECI** will evaluate each system to determine if the piping can be recycled or salvaged. Segregation for recycle or salvage will be conducted during the general demolition activities. Piping will be staged in designated areas for eventual sizing and scrap recycling.

AECI will maintain an "as-built" set of drawings at the Field Office indicating those utilities which have been decommissioned. **AECI** will mark the ends of all underground utilities remaining in place for future location.

☐ PIPING DECOMMISSIONING - NATURAL GAS

The natural gas piping to be evacuated and removed will be located and marked. Disconnection of the isolated piping will proceed utilizing all safety and standard removal procedures for the piping. As scheduled by the Project Manager, the disconnection of the natural gas supply will be completed within those buildings scheduled for interior and/or exterior demolition. The Project Manager will coordinate with the Gas Company regarding gas meter location, main supply line evacuation, and Gas Company protocol of evacuating lines.

After the natural gas line(s) has been disconnected, the line shall be accessed and a receptacle installed to allow for connection with a pressurized air system. The compressed air system will be utilized to purge the natural gas from the lines. The purged natural gas will be allowed to vent into the atmosphere. Once purging has been completed, the abandoned natural gas lines and remaining meters may remain in place for removal during the general demolition activities. **AECI** will evaluate each system to determine if the piping can be recycled or salvaged. Salvageable items will be removed following general demolition. Piping will be staged in designated areas for eventual sizing and scrap recycling.

AECI will maintain an "as-built" set of drawings at the Field Office indicating those utilities which have been decommissioned. Disconnected underground utilities will be capped and/or marked (as needed).

1.2.3 PROCESS TANK AND ASSOCIATED PIPING CLEANING

Plating line surfaces, associated with plating tanks and piping, will be cleaned by utilizing a high pressurized water source to remove the residual product and/or matter from the plating line. Plating tanks that once held rinse water or deionized water will be cleaned in the same manner as all others, however, the focus of the plating line cleaning will be on those tanks which contained various chemical fluids utilized in plating operations.

Prior to tank cleaning, each tank will be unbolted from the existing tank foundation by **AECI**. Due to the size and proximity of the tanks to one another, the personnel working in between the tanks will have met the OSHA requirements for confined space entry and the protocol established in the Site-Specific Health & Safety Plan. After each tank has been unbolted, one end of the tank will be raised an estimated one to two feet, either by the existing overhead crane or by raising the tank with standard lifting equipment and placing a sturdy support underneath the raised end. Once this has been completed, the impacted surfaces of the tank will be triple-rinsed with a high-pressure water source. Rinsing will begin at the raised end of the tank and progress to the lower end, where all rinseate will accumulate for removal. As the tank is being rinsed, a DOT licensed vacuum truck will remove the accumulating rinseate via a 2-inch suction hose placed either over the edge of the tank or connected to an existing valve at the receiving end of the tank. After the tank has dried, the side of the "cleaned" tank will be marked with a non-toxic/non-lead/non-toluene marking paint to indicate that decontamination of that specific process tank has been completed.

The piping associated with the plating line and/or process tanks will be disconnected and taken to a specified area where it will be staged for cleaning. At this area, the pipe will be triple-rinsed with a high-pressure water source by placing the water source at one end of the pipe and thoroughly flushing the interior of the pipe. The rinseate that is generated will be collected in a DOT approved container. The cleaned pipe will be marked with a non-toxic/non-lead/non-toluene marking paint to indicate that cleaning of that specific portion of pipe has been completed. This protocol will be utilized for pipes associated with the plating lines.

PPE used during plating line cleaning will be in accordance with the approved Health and Safety Plan. AECI will maintain an "as-built" set of drawings at the Field Office indicating those plating lines and process tanks which have been cleaned and marked.

Upon cleaning of the process tanks and associated piping, AECI will notate the "as-built" set of drawings located at the Field Office indicating those units which have been cleaned and released. These units will be considered as general demolition debris or sold for resale.

EXHAUST DUCTS

AECI will perform a reconnaissance of the process tanks and associated piping utilized for plating or cleaning operations. AECI personnel will evaluate which chemicals, cleaners, and rinse waters are compatible to allow for accumulation of wash fluids generated from cleaning operations. Associated with the process tanks and spray booths are the exhaust scrubber systems utilized in managing exhausts from these systems.

Exhaust ducts leading to and exiting from process tank and spray booths will then be cleaned. Exhaust ducts will be disconnected from the scrubber and staged within the general work area. During disconnection of the exhaust ducts, care will be taken to avoid disrupting any residual matter which may have accumulated on the interior of the duct. As ducting is accessed and removed, AECI personnel may shroud the ends of the exhaust ducting with 6 mil plastic bags to containerize any residual matter which may become loosened during removal.

Upon completion of exhaust duct disconnection, cleaning activities will commence. This will consist of placing portions of the duct in open topped 250-gallon polyethylene containers. A pressurized water source will be introduced into the interior of the duct. The entire duct interior will be rinsed and the resulting rinseate will accumulate in the polyethylene container. The generated rinseate will be transferred to DOT approved containers for eventual sampling and disposal.

This cleaning process will be used for all exhaust ducts associated with process tank fume scrubbers and paint booth exhaust systems. Cleaned portions of exhaust ducts will be marked as such with a non-lead, non-toxic, non-toluene based marking paint and placed in a general staging area for eventual disposal. PPE used during the cleaning of the exhaust scrubber systems will be in accordance with the approved Health & Safety Plan. These exhaust system components will be considered as general demolition debris or sold for resale.

Process liquids which have impacted areas other than the process tanks, such as floor grating and surrounding structures, will be pressure washed and the generated rinseates accumulated for disposal. Pressure cleaned items will be considered as general demolition debris and removed during building demolition.

COMPRESSED AIR LINES

All compressed air lines will be relieved of the remaining air trapped in the lines. As lines are being abandoned, AECI will remove oil/water separators which are located in-line of the compressed air system. These units will be disconnected from the lines and any fluid contained in the separators will be emptied into 5-gallon spill proof plastic containers. At the end of each day, the containerized fluid will be transferred into 55-gallon 17H D.O.T approved drums labeled "Oily water from compressed air lines". Accumulated fluids containerized in 55-gallon 17H D.O.T approved drums will be marked as "Oily water from compressed air lines" and located at the temporary waste storage and processing area. Containers will be sealed while being moved or transported to ensure no leakage of fluids. Absorbent will be available when separated oil removal activities are being conducted, in case of a spill. Waste absorbent will be placed in a drum labeled "Oily Absorbent" or incorporated into an existing oily absorbent waste stream generated from general facility decontamination. Remaining air compressor lines will be removed during general demolition activities.

☐ CLEANING OF CONCRETE

SITE IDENTIFICATION / PREPARATION

A variety of surface areas throughout the site have possibly been impacted with oils or chemical constituents. These areas contain accumulations of materials (predominantly petroleum hydrocarbons) that have been deemed to require cleaning prior to demolition or disposal.

A reconnaissance of the area to be cleaned will be conducted and if any equipment (i.e., machinery, testing equipment, building debris, etc) or debris is present in these areas, these items will be removed and staged outside the general work area. Some areas which require cleaning are covered with asbestos floor tile. The floor tile will be removed under asbestos removal procedures prior to cleaning activities. Once the area has been cleared for asbestos, the cleaning activities will proceed.

SURFACE CLEANING

After the area is cleared, AECI will initiate the cleaning of the area by scraping the surface of any residual buildup which may have accumulated over time. Scraping the surface will be conducted with a thin concrete scraping tool to remove surface residual matter. Where oily surfaces are involved, personnel will utilize a oil absorbing media to remove as much oil as possible from these areas. The used absorbent will be swept, collected, and containerized in a DOT approved 5-gallon plastic pail or 17H 55-gallon steel drum depending upon the amount generated.

The area will subsequently be high pressure steam cleaned utilizing a HydroTek SC30005 Series pressure washer. The Hydro Tek Unit can generate a 3,000 psi high pressure spray with a steam temperature ranging between 150-200 degrees Fahrenheit (F). This unit also contains a detergent dispenser to distribute detergent into the pressure system during cleaning. Cleaning will be

conducted with a non-phosphate, non-toxic cleaning agent (Alconox or equivalent). The surface area being cleaned may also be scrubbed with stiff bristle brooms during high pressure spraying to assist in the removal of residual matter, as necessary.

As cleaning of the concrete surface commences, rinseate will be generated and accumulated in the lowest portion of the subject area. These accumulation points may already be established depressions or trenches. Areas which are flat in origin will require personnel to accumulate fluids by utilizing a squeegee to direct rinseate to a vacuum hose and removed utilizing a duckbill attachment.

The rinseate will be collected in a DOT licensed vacuum truck. The vacuum truck will be established outside the general work area and will utilize 2-inch or 3-inch vacuum hoses to vacuum up the rinseate. Prior to the start of the vacuum operations, the hoses and gaskets will be inspected and any faulty materials replaced. If the area to be cleaned is of minimal surface area, waste rinseate may be accumulated with a wet/dry vacuum with a minimum of 35-gallon capacity. Vacuuming of fluids will be conducted in the same manner described using a vacuum truck. After the wet/dry vacuum canister is full, the motor housing will be removed and the fluids emptied into DOT approved 55-gallon poly drums for eventual into poly tanks with other compatible rinseate liquids.

WASTE MANAGEMENT

Upon completion of cleaning activities, the vacuum truck will off-load the rinseate into one of the supplied storage tanks or "poly tanks". For small surface areas or minimum quantities, drums will be utilized for storage of waste rinseate for eventual incorporation into poly-tanks with the rest of the rinseate liquids. The tank/drum will be labeled as "Waste Rinseate" with any known contaminants listed on the label where it will remain, pending analysis. Analytical results of the rinseate will determine its final disposition. Upon completion of off-loading of the rinseate, the interior of the vacuum truck will be cleaned using an on-board high pressure washer and the residuals pumped into the storage tank. The fluids will be containerized for eventual sampling and characterization. After the characterization of the rinseate is complete and approved by the MDC, AECI will coordinate the removal of fluids from the site with MDC. Fluids meeting the City of Torrance, Metropolitan Wastewater Department, Industrial Waste Discharge Permit, will be disposed of using the sanitary sewer system.

During removal of the fluids from the storage vessel, AECI will clean the poly tank/drum utilizing an on-board pressure washer from the vacuum truck hauling the rinseate. Removal of the liquids and cleaning of the tank will be accomplished at the same time. All manifesting and placarding will be coordinated prior to shipment of any material off-site.

Drums containing oily contaminated absorbent generated from the cleaning activities will be labeled as "Oily Absorbent". At the end of the work day, containers will be transported to the temporary waste storage and processing area. The characterization of this material will be coordinated with MDC. Once characterized, this waste material may then be incorporated into other hydrocarbon waste streams. If the absorbent is possibly contaminated with heavy metals,

containers will be labeled as "Metal Contaminated Absorbent" and will remain for eventual characterization.

For areas in which decontamination has been completed, the area will be marked "cleaned" in florescent green paint. AECI will maintain an "as-built" set drawings at the Field Office indicating those areas which have been cleaned and approved.

☐ FREIGHT ELEVATOR DECOMMISSIONING

The specific items to be removed include those freight elevators and components which are associated with building structures. The electrical power to the elevator, and the backup electrical systems will be disconnected. Hydraulic fluids (if applicable) will be drained or pumped from the elevator components and containerized for eventual off-site recycling. Fluids will be contained in DOT approved 17H 55-gallon steel drums, labeled as "Waste Oil from Building ___ Elevator". The fluids will be temporarily stored in the temporary waste storage and processing area. The specific guidance relating to the cleaning of the PCB containing equipment is outlined in the following sections.

Oil absorbing material will be used to remove residual surface oil or dirt accumulations from the area surrounding the elevator equipment or elevator pit floor. Waste absorbent will be placed in a DOT approved 17H 55-gallon drum labeled "Oily absorbent" staged in the temporary waste storage and processing area.

Following removal of hydraulic oil from the hydraulic elevator components, the reservoirs will be disconnected and removed from their current location. The reservoirs will then be drained of oils and handled as described above, depending on the presence of PCBs. The reservoirs will then be considered scrap metal and recycled or sold.

Oil stained concrete in the elevator pit areas will be decontaminated utilizing the concrete cleaning methodology described in Cleaning of Concrete, Concrete Surfaces, Section 1.2.3. Work will not be performed inside elevator shafts until the elevator cab has been completely removed or permanently secured and the workers in the elevator shaft are protected from falling debris. Where necessary, confined space protocol will be utilized for worker health and safety.

During removal and excavation activities of the elevator pit, any potentially contaminated soils which are encountered will be noted and reported immediately to MDC. Potentially contaminated soil removed from the excavation as part of demolition will be stockpiled on and covered with 6 mil plastic sheeting immediately adjacent to the work area. Characterization of the soil, if required, will be conducted by others or upon special request by MDC. Open excavations will be delineated by barricades and caution tape. AECI will follow the requirements applicable for excavations by regulatory agencies and will be responsible for the backfilling and compacting of the excavation.

Upon completion of the removal of the elevator and backfill of the excavation, **AECI** will mark the “as-built” set of drawings located at the Field Office indicating those units which have been removed and top of shaft elevations.

☐ **DECONTAMINATION OF POLYCHLORINATED BIPHENYL (PCB)
CONTAINING EQUIPMENT AND RELATED ITEMS**

The specific PCB containing item to be removed will be located and marked prior to removal. Disconnection and/or removal of the item will proceed utilizing all safety and standard removal procedures for the specific item. **AECI** will disconnect all cables and conduits leading into and from the specific unit (as needed).

Regarding transformers, **AECI** will locate the release valve (or bung) on the specific item and utilize a pump to extract the oil from the unit. PCB contaminated oil will be pumped from the unit and contained in DOT approved 17H 55-gallon drums. Drums containing PCB contaminated oil will be labeled as “PCB Oil”. Information on the drum label will include the specific transformer ID, building number, and the PCB concentration indicated in parts per million (ppm), if known. **AECI** will utilize a “PCB” label in conjunction with the standard Hazardous Waste label for PCB oil and/or debris.

Oil’s not containing PCBs will also be removed and contained in DOT approved 17H 55 gallon drums and will be label as “Waste Oil”. Waste oil and PCB oil will be located in adjacent but separate sections of the temporary waste storage area.

During the pumping of fluids, **AECI** will utilize polyethylene spill containers under the drum(s) receiving the oil. In addition, bags of absorbent (Superfine) will be available when oil removal activities are being conducted in case of a spill. Any used absorbent will be placed in drums labeled “Oily Absorbent” or incorporated into an existing oily absorbent waste stream generated from general facility cleaning. Absorbent will be segregated has “Oily Absorbent” and “ PCB Debris”. Segregation will follow that protocol established for fluids. Contaminated visqueen will be included in the debris waste stream.

AECI will maintain a list of equipment sold and denote on the “as-built” set of drawings at the Field Office indicating those items which have been drained and/or sold for resale.

Workers handling items and/or containerized fluids from roofs or second story locations, will utilize scaffolding or motorized lifts to assist in handling these items. Precautionary measures will be discussed prior to implementing removal activities. These measures will be outlined by the Task Supervisor and will include both operational and health and safety issues. Cal-OSHA requirements will be followed for any above ground or below grade activities. While moving containerized fluid down access stairways, the lids on all spill proof containers will be sealed to reduce the potential for fluid leakage. Drums will be handled with a drum grabber or fork attachment during transportation throughout the facility. If containers require transfer via lifts, the container will be chained to the lift basket and secured to prevent container from overturning.

LEAD CABLE

AECI will provide the necessary personnel and equipment to disconnect the main power feed to the facility or specific areas in which demolition work is to proceed. **AECI** will utilize an electrician to verify that power has been disconnected to all electrical cables and once de-energized, removal of the cable will be implemented and will consist of cutting the cable from within each manhole.

When removal of lead cable is necessary from within manholes or electrical vaults, **AECI** will implement Confined Space Entry protocol for those employees or entrants assigned to the removal activities. A copy of this protocol will be attached in the **AECI** Health & Safety Plan, which will be available at the Field Office. As required by OSHA 1910.146, Permit Required Confined Spaces, confined space permits will be issued for specific work tasks. This permit will establish applicable isolation checklist, hazardous work, hazards expected, atmospheric monitoring to be conducted, and ANSI approved extraction equipment to be erected at each entry portal accessed. The original permit will be located at the entry portal and a copy will be kept at the Field Office.

1.2.4 REMOVAL OF LIGHT FIXTURES AND BALLAST

☐ LIGHTING

Disconnection of the lights will proceed utilizing all safety and standard removal procedures, including disconnection of electrical feed to system and removal of electrical breakers for lighting systems. After the electrical system has been de-energized, the plastic cover for the light fixture, if present, will be removed and placed on the floor, at which time the exposed fluorescent light tubes will be removed by hand and placed in a rubber/plastic container for temporary storage during removal.

AECI will utilize rolling scaffolding to support workers on single story floors. For ceilings which are of greater height, a motorized lift will be utilized to assist in retrieving light tubes and other lighting fixtures. Health and safety issues related to overhead work will be addressed in the Site-Specific Health & Safety Plan.

As temporary containers become full, they will be transferred to a central location within the building. The tubes will then be placed directly into a DOT approved cardboard storage box which is accepted at any licensed fluorescent light recycling facility. The box will be sealed and palletized. The pallet will hold up to 16 boxes and the boxes will be secured to the pallet with stretch wrap. Full pallets will be transported via forklift to the temporary waste storage area. **AECI** will mark the box with the customer's name and address and a packing list will be attached to the container.

During fluorescent light removal, if any tubes break, personnel will gather the broken items and containerize them in a 5-gallon plastic container. At the end of the day, accumulated broken bulbs will be placed in a DOT 17H 55-gallon steel drum labeled "Broken Fluorescent Tubes" and located

in the temporary waste storage area. This drum will then be sealed and labeled for eventual characterization.

For other light fixtures or bulbs, items will be separated and pelletized for eventual off-site recycling or resale. Removal and handling of the units will follow similar procedures as outlined above.

☐ HANDLING OF NON-PCB AND PCB BALLASTS

After removal of fluorescent light tubes, the fixture cover will be removed to access the light ballast for inspection. The inspection will be completed with the fixture in place. Inspection of the light ballast will include a careful review of the ballast label to determine if the ballast contains PCBs. If the ballast is not marked "No PCBs" or the label is removed or unreadable, it shall be assumed that the ballast contains PCBs. If the ballast does not contain PCBs, as determined by this definitive visual inspection, the non-PCB ballast will be left attached to the light fixture for disposal as general building debris.

Ballasts which are not clearly marked as "No PCBs" shall be removed from the fixture by disconnecting the mounting bolt or rivet, clipping and leaving as little conductor wire attached to the ballast as possible. Immediately upon its removal from the fixture, the ballast will be placed in a designated wheelbarrow or equivalent (stenciled "PCB" or color coded) and relocated to a central location within each floor of the building. During removal of the ballast, if any portion of the light fixture is impacted with PCB oil, the portion of the impacted fixture may be cleaned by scraping the oil from the unit or wiping the oil from the fixture. Any generated residue or wiping clothes will be considered PCB impacted and incorporated into the drummed ballast waste stream. will be drummed. These locations will be marked as temporary PCB storage areas by signs, barricades, and/or delineators.

After the PCB ballasts have been removed and are staged in a central location, the PCB impacted ballasts will be stacked on wood pallets with a sheet of 6 mil plastic between the pallet and ballast, thus reducing the potential for a leaking ballast to release to areas during staging or relocation. Ballasts that are pelletized for eventual relocation to the temporary waste storage and processing area at the end of the work day. At the temporary waste storage and processing area, the ballasts will be staged until such time that quantities merit lab-packing. Approximately once a week, AECEI personnel will facilitate the packing of PCB light ballasts. Packaging will consist of placement of the ballast into a DOT approved 17H, 55-gallon steel drum. Absorbent will be added to the bottom of the drum and throughout the drum until the drum is completely full. All lab packing will be in accordance with California Administrative Code (CAC) Title 22, DOT, and any requirements of the disposal facility.

Ballasts will be recycled by incineration. All drums containing PCB ballasts will be labeled with a hazardous waste label with the description of "R.Q." Waste Polychlorinated Biphenyl, 9, UN2315, P.G.III. This description will be required for any shipment of drummed PCB ballasts.

Leaking PCB containing light ballasts or ballasts in which the integrity of the ballast is questionable, will not be stockpiled with other ballasts. These ballasts will be placed in a white 5-gallon plastic pail, stenciled "Leaking PCB" and will be stored and packaged as outlined above.

Ballasts that are identified as "non-PCB containing" and have been left in place on the light fixture will be released as general building debris and handled as non-hazardous demolition waste. AECI plans to leave any non-PCB ballast attached to the light fixtures to be removed during building demolition and transported to a metal recycling facility.

1.2.5 EQUIPMENT DECON AND REMOVAL

☐ **REMOVAL OF MERCURY CONTAINING EQUIPMENT**

Disconnection of the isolated item will then proceed utilizing all safety and standard removal procedures for the specific item. As removal of like items proceed in an individual building, thermostats, thermometers or light switches will be removed, the wires clipped and the removed glass ampules placed in 5-gallon spill proof plastic containers containing several inches of absorbent media. This media will cushion the ampules during facility transportation and absorb free-flowing mercury if ampules were to break or leak. The AECI personnel involved in the removal and handling of mercury containing equipment will be given a Mercury Spill Response Kit in case of a spill or release.

Upon completion of the days activities, the 5-gallon spill proof plastic containers will then be taken to the temporary waste storage area for proper packaging. The pails shall be placed into the drums, with the remaining void space filled with absorbent. The drum lid will then be secured and the drum labeled with the generator information and proper shipping name. The MDC's representative will be notified of the quantity of containers generated and currently inventoried in the designated temporary storage area. The drum(s) will be available for the MDC to facilitate off-site disposal or recycling.

AECI will maintain an "as-built" set of drawings at the Field Office indicating units which have been removed and/or document units which were located but were not listed.

☐ **SMOKE DETECTOR REMOVAL (IF APPLICABLE)**

The smoke detectors to be removed will be located, identified, and cleared of all obstructions. Disconnection of the isolated smoke detector will proceed utilizing all safety and standard removal procedures. This will include disconnecting the electrical feed to the section of the building where the removals are taking place. The electrical wires feeding the isolated smoke detector will be clipped, and the unit removed. No attempt will be made to open the sealed canister containing the radioactive component of either Americium-241 or Cesium-137.

Removed smoke detectors will be placed into manufacture provided boxes suitable for the shipping of the smoke detector devices. Drums will not be used for shipment of smoke detectors. The boxes will contain 35 to 40 devices with each device being placed into a sealable plastic bag as

recommended by the manufacturer. Boxes will be labeled "Smoke Detectors" and secured in the temporary waste storage area. AECI will notify the MDC's representative as to the quantity of containers. Shipment will be in compliance with DOT regulations and manufacturer's recommendations.

AECI will maintain an "as-built" set of drawings at the Field Office indicating areas of buildings from which devices have been removed. Workers will be instructed on the type and style of radioactive smoke detectors. If other detectors are discovered, this will be brought to the attention of MDC.

Workers performing other site work will be made aware of detectors of concern during tailgate meetings by discussion and pictures. If detectors are encountered during subsequent site work, the units will be removed as outlined above. Exit signs will be included under radioactive device removal.

☐ **REMOVAL AND PACKAGING OF BATTERIES (EMERGENCY LIGHTING AND BACKUP POWER)**

The battery to be removed will be located and the cover removed for access. Disconnection of the battery will proceed utilizing all safety and standard removal procedures and is to include cutting electrical lines to the battery and removing the isolated battery. As removal of batteries proceeds in an individual building, the removed batteries will be staged in a central location designated by the Environmental Task Manager for eventual packaging. Upon completion of the days activities, the batteries will be taken to the temporary waste storage area for proper segregation and packaging.

Packaging will consist of placement of the undamaged batteries onto wooden pallets. If a battery is found to be cracked, leaking, or if the integrity of the battery is potentially impaired, it will be containerized in designated poly drums or 5-gallon containers at the temporary waste storage area, for eventual shipment off-site. AECI will coordinate the handling of the pallets with MDC. All pallets and/or drums will be packaged and labeled according to State or Federal requirements.

AECI will maintain an "as-built" set of drawings at the Field Office indicating those units which have been removed and/or document units which were located but were not listed.

SECTION 1.3

UTILITY DISCONNECTS

1.3 UTILITY DISCONNECTS

☐ UNDERGROUND UTILITIES

Asbestos abatement and regulated waste removal operations will require the use of water and power. Once this work is completed, the utilities will be disconnected, building by building.

Electrical components of the buildings will be terminated by a licensed electrician. All service locations will be tested and confirmed to be "dead" before any demolition work proceeds.

Sprinkler systems and fire mains servicing the buildings will be shut down and drained just prior to demolition of the building. Organic materials will be removed immediately after the fire protection system is shut down.

Main feeds will be terminated upon completion of all demolition, with the utilities removed in accordance with the project specifications.

Before any interior demolition and/or superstructure demolition is to begin on each building, the location of all underground utilities will be marked in the field. The identified utilities and capping location will be located on the Project Record Document and the locations shall be staked with the utility identification for MDC to survey. All work is to be completed in accordance with City of Torrance and/or Utility Company standard specifications and requirements.

☐ UNDERGROUND SERVICE ALERT

Before any demolition and/or utility capping or removal work can take place, Underground Service Alert shall be contacted no later than 48 hours before digging shall begin.

☐ GAS AND ELECTRICAL SERVICE

A Certificate of Discontinuance of Service for each building to be demolished is required from Torrance Gas & Electric Company, Planning Department. Gas and electric utilities will be shut down to these individual buildings before any decon or demolition will take place. All other buildings will be shut down as the schedule progresses.

☐ TELEPHONE SERVICE

Before any building can be demolished, a notification is required by the telephone service, Building Industry Consultant Service.

☐ SANITARY SEWER

After a Sanitary Sewer Permit is pulled, **AECI** shall contact the City of Torrance for a sewer cap inspection after the capping has been completed and before the caps are covered. The sewer line must be capped with an approved no-hub clamp-type coupling with a cap or other approved capping device on private property. Since buildings may be demolished as other buildings will stay in operation, the utilities to certain buildings shall be capped within each building footprint. As soon as all buildings are released for demolition the Sanitary Sewer shall be capped within 5 feet of the property line.

SECTION 1.4

DEMOLITION OPERATIONS

1.4 DEMOLITION SCOPE OF SERVICES

1.4.1 GENERAL DEMOLITION PARAMETERS

The following parameters for demolition services include:

- ▶ Existing pits will be removed completely with the assumption that the floor of the pit does not exceed a one foot depth.
- ▶ Utilities will be abandoned and capped in place without removal for the area of work as shown on the drawings provided.
- ▶ Solid inert materials generated from demolition operations will be crushed and used on site for backfill material.
- ▶ All voids will be backfilled and compacted. Inspection and testing will be by others.
- ▶ Regulated materials will be removed as described herein.
- ▶ Asbestos abatement will be completed in accordance with the report prepared by Hall-Kimbrell Environmental Services, Inc.
- ▶ Removal of concrete to a depth of 4 feet from existing surface grade with exception of the machine foundations which have been assumed to have a structural depth of one foot depth. Additional removals would be at a negotiated extra cost. Complete removal of all pits is included.
- ▶ Erosion control consisting of double row of sand bags along 190th Street and 2 desilting basins is included.
- ▶ Area will be graded to a generally level state upon completion.
- ▶ **AECI** will obtain permits for demolition and Storm Water Prevention Plan.

The general sequence of work as it relates to each of the buildings to be decommissioned is as follows:

- ▶ Asbestos abatement
- ▶ Regulated building material removal
- ▶ Salvage removals
- ▶ Removal of trash and debris (soft demolition)
- ▶ Demolition of superstructure (hard demolition)
- ▶ Demolition of building slab
- ▶ Excavation and removal of pits and foundations
- ▶ Backfill and compaction of voids
- ▶ Grading and placement of base material and erosion control

The work to be completed as stated herein. After environmental clearance of each building is obtained, demolition will proceed as follows:

Asbestos abatement and regulated wastes will be removed concurrently in different areas of each building. Clean closure of these areas will be confirmed before any building demolition proceeds.

Inspection of the utility as-builts will be conducted and the utilities disconnected that are servicing the building. The Gas company will terminate its facilities, and electrical services will be disconnected by a licensed electrician. Water services will be shut down at the appropriate gate valve.

Sprinkler systems will be drained from the building and disposed of in the existing storm drain system.

Miscellaneous salvage operations will proceed first inside of the buildings concurrent with other operations. Trash will be removed from the building as it is accumulated and disposed of into a roll off trash bin or semi end dump truck.

Existing electrical breakers will be tested and confirmed to be dead, wires cut and the breakers removed as salvage.

Copper wire will then be removed from its conduit by connecting to the wire, one at a time, and then removed using a bobcat loader. Wire will be staged and then loaded into roll off containers once enough materials has been accumulated.

The existing sprinkler system and miscellaneous pipe materials will be cut into sections and placed onto the ground with a fork lift. Laborers will use rolling scaffold to cut sections using a hand saw. Materials will be accumulated and placed in piles before loaded onto trucks for resale.

Upon completion of the salvage operations, wall partitions, trash, insulation and miscellaneous debris will be removed from the inside of the building. Trash will be staged in a pile, loaded and hauled to the local landfill for disposal.

The building frame will be demolished with a backhoe with shear attachment. Materials will be cut and lowered to the ground. Materials will be placed behind the demolition operation by the shear, where a second shear will separate the structural steel from the tin and trash from the roof.

Steel, tin and trash will be loaded into trucks and hauled off the site as they accumulate.

Areas with mezzine consisting of steel frame and concrete floor will be demolished as described above, with the concrete separated from the steel and all materials recycled.

Once the superstructure has been removed, and the slab cleaned of all trash and debris, the slab will be stomped into 3 foot ribbons. Concrete will then be loaded into semi end dump trucks using a Cat 973 loader. Concrete will be stockpiled onsite at a designated rubble location before the materials is crushed and processed as fill material.

After the slab has been removed, the footings will be located and removed using a backhoe with bucket attachment. The footings will then be loaded into trucks with a Cat 973 loader and hauled to the crushing site, where they will be sized to 2 foot minus, and then crushed. The steel reinforcement will be removed from the concrete using hand labor and torch cutting equipment. The steel rebar will be salvaged as steel scrap and removed from the site.

The resulting voids created from the demolition and removal of pits will be backfilled with compacted onsite soil and crushed materials generated from the demolition operations in accordance with the specifications.

1.4.2 RECYCLING OF CONCRETE AND ASPHALT

A rubble stockpile area will be situated at the north east area of the property. Concrete and asphalt rubble materials will be recycled into a Caltrans Standard Class II road base material. Material will be crushed to the "fine" gradation (3/4-inch minus). The recycling process involves loading the material with a Cat 988 loader into a vibrating grizzly which feeds the material to a 30-inch by 42-inch Universal jaw crusher. Material will be reduced at this stage to 6-inch minus. Material are then moved by conveyor to an 8-foot by 20-foot vibrating screen with attached cone crusher. Material will be crushed to a 3/4-inch minus dimension as a final end product and discharged on a 100-foot inclined stacker.

Steel material which is contained in the concrete will be removed by a belt magnet. All organic and deleterious materials will be removed before rubble is hauled to the stockpile. Water will be controlled by water spray nozzles on all discharge points of the crushing plant. The plant will be permitted by the local air quality district, with permits posted in the generator van.

SECTION 1.5

WASTE MANAGEMENT AND SALVAGE AND DISPOSAL STRATEGY

1.5 HAZARDOUS WASTE MANAGEMENT

A variety of hazardous and non-hazardous wastes are anticipated to be generated during the remediation and demolition of this facility. These wastes may include:

- ▶ Sewer rinseates
- ▶ Rinseates from decontamination of petroleum contaminated areas
- ▶ Rinseates from decontamination of PCB contaminated areas
- ▶ Rinseates from process tank(s) and process lines
- ▶ Lead contaminated wastes
- ▶ Asbestos waste
- ▶ Fluorescent light tubes
- ▶ PCB contaminated light ballasts
- ▶ CFC waste
- ▶ Mercury waste
- ▶ Batteries
- ▶ Smoke detectors (radioactive waste) and
- ▶ General demolition debris and salvageable materials

General demolition debris and salvageable materials will be segregated and stockpiled at the work areas. Asbestos waste will be containerized directly at the work area. The remainder of the waste, generated during lead abatement and building decontamination, will be stored at temporary waste storage areas established by either **AECI** or by **MDC**.

The bid specifications did not delineate which wastes would be managed by **AECI** and which would be managed by **MDC**. Therefore, waste management activities described herein are applicable only as they are incorporated into the Final Agreement. Specifically, the transport and disposal aspects discussed below will depend on this Agreement. Waste collection, packaging, labeling and consolidation will be performed by **AECI** for all wastes.

All wastes generated will be stored, transported, manifested, and disposed of in accordance with Federal, State and local regulations and the contract specifications. All material leaving the site for either recycling or disposal will be accompanied by a Material Disposition Record (MDR) signed by a representative of both **AECI** and **MDC**. Hazardous waste manifests will be submitted for review and signature of authorized **MDC** personnel. A file containing copies of all waste disposal and tracking documents will be maintained at the Field Office at the site.

Wastes managed by **AECI** will be stored in the **AECI**'s temporary waste storage area(s). The configuration, size, number and location of these areas will be determined by specific types of wastes to be managed. At a minimum, an area adjacent to the Field Offices will be set aside for management and storage of hazardous wastes.

☐ **RINSEATES FROM DECONTAMINATION OF PETROLEUM CONTAMINATED AREAS**

Rinseate from decontamination of petroleum contaminated areas will be stored in 5,000-gallon poly baker tanks. Rinseate from each days decontamination will be consolidated into this tank. **AECI** will label the tank as wastes are placed in the tank. Tank labels will include date generated, source, and suspected contaminants. If, after profiling, it is determined that the liquid can be discharged to the sewer **AECI** will pump the contents of the tank into the nearest sewer access point. If it is determined that the waste cannot be discharged to the sewer the waste will be transported to and disposed of at an appropriate approved disposal facility.

☐ **RINSEATES OR SOLIDS FROM DECONTAMINATION OF PCB CONTAMINATED AREAS**

Rinseate from decontamination of PCB contaminated areas will be stored in appropriate containers. Rinseate or solids from each days decontamination will be consolidated. **AECI** will label the wastes and will include date generated, source, and suspected contaminants. If, after profiling, it is determined that the liquid can be discharged to the sewer **AECI** will pump the contents of the tank into the nearest sewer access point. If it is determined that the waste cannot be discharged to the sewer the waste will be transported to and disposed of at an appropriate approved disposal facility.

☐ **RINSEATES FROM PROCESS TANK(S) AND PROCESS LINES**

Rinseates from decontamination of process tanks and process lines will be stored in appropriate containers. Rinseate from each days decontamination will be consolidated. **AECI** will label the tank as wastes are placed in the tank. Tank labels will include date generated, source, and suspected contaminants. If, after profiling, it is determined that the liquid can be discharged to the sewer **AECI** will pump the contents of the tank into the nearest sewer access point. If it is determined that the waste cannot be discharged to the sewer the waste will be transported to and disposed of at an appropriate approved disposal facility.

☐ **LEAD CONTAMINATED WASTES**

Lead wastes generated from lead paint removal will be stored in a 20-yard closed top bin in the **AECI's** waste storage area. Lead waste will be consolidated into the bin at the end of each day. Upon completion of all lead abatement activities at the site, a representative sample will be collected from the bin and sent for lead analysis (STLC and TCLP if necessary). Depending on the results of this analysis, this waste will be taken off-site and disposed of at an appropriate MDC approved waste disposal facility. Responsibility for hazardous waste disposal will be determined by the Final Agreement.

☐ **ASBESTOS WASTE**

Asbestos waste generated from asbestos abatement will be stored in sealed 40-yard bins adjacent to the work area. Asbestos waste will be placed directly into the bin at the work area. As bins become full they will be transported offsite and disposed of at a MDC approved Class III waste disposal facility.

☐ **FLUORESCENT LIGHT TUBES**

At the end of each day, fluorescent light tubes removed during building decontamination will be stored on pallets in DOT approved cardboard storage boxes and covered with visqueen sheeting in the waste storage area. Upon completion of light tube removal at the site, the tubes will be taken off-site for recycling.

☐ **PCB CONTAMINATED LIGHT BALLASTS**

At the end of each day, PCB contaminated ballasts removed during building decontamination will be stored on pallets in DOT approved drums. Upon completion of ballast removal at the site, the drums will be taken off-site for disposal at a MDC approved facility. Responsibility for hazardous waste disposal will be determined by the Final Agreement.

☐ **CFC WASTE**

Refrigerant cylinders from CFC removal operations will be stored in racks in the waste storage area at the end of each day. Upon completion of CFC removal operations the cylinders will be taken off-site for recycling.

☐ **MERCURY WASTE**

Mercury waste will be contained in spill-proof containers. These containers will be stored on pallets in the waste storage area at the end of each days work. Upon completion of removal of mercury contaminated materials the container(s) will be sent to a approved recycling facility for recovery and reuse.

☐ **BATTERIES**

All batteries removed from emergency lighting devises will be stored in 55-gallon DOT approved poly drums for eventual recycling.

☐ **SMOKE DETECTORS (RADIOACTIVE WASTE)**

All exit signs will be staged on wood pallets and located in the Waste Storage Area. Signs will be stacked and shrink wrapped prior to offsite removal at a approved facility.

SECTION 1.6

SEQUENCING OF WORK / PROJECT SCHEDULE

1.6 SEQUENCING OF WORK

AECI understands the critical nature of this project and that project scheduling, sequencing of work, and interface of trades during performance of this work will be a significant factor in the timely and efficient completion of the project. To this end, AECI has created a detailed project schedule which describes sequencing of work from building to building (see attached project schedule).

Completion of this project will involve the coordination of several separate but closely integrated work crews performing tasks in an orchestrated sequence to reduce down time and increase efficiency. The field crews to be utilized on this project will include:

☐ ASBESTOS REMOVAL CREWS

Each Asbestos Abatement Crew will be comprised of a foreman and laborers. Three asbestos removal crews with identical duties will be used simultaneously during this project. As shown on the proposed project schedule each crew will be assigned to a separate building to complete this portion of work quickly and allow other work to begin. Asbestos removal is critical to the sequencing of this project because this work often involves isolation of an entire building, making it unavailable to other work crews. The asbestos removal work must be completed prior to commencement of demolition activities. However, environmental work can proceed prior to asbestos removal if necessary. In some cases asbestos removal activities, environmental decon, and soft demolition can occur concurrently since separate areas of the building can be isolated.

☐ ENVIRONMENTAL WORK CREWS

Several crews will be used during performance of this project to address environmental concerns within each building. These crews will work on a single building simultaneously. The crews have been specialized in an attempt to increase efficiency. However, tasks performed by work crews may vary based on the particular need during the schedule. Environmental work must be completed prior to commencement of demolition activities and in some cases environmental work will proceed prior to asbestos removal. However, in other cases light and ballast removal must be performed after asbestos removal so that interior lighting is available for asbestos removal. The crews will include:

▶ DECONTAMINATION PROTOCOL

The TPH / PCB Decontamination Crew will be comprised of a foreman and laborers using high pressure steam cleaners, vacuum equipment, and miscellaneous hand tools and supplies. This work crew will be tasked with the cleaning and/or removal of areas and equipment contaminated with petroleum hydrocarbon and PCBs. This includes transformers and surrounding contaminated areas, elevators and other petroleum containing equipment, and contaminated trenches, pits, and concrete surfaces.

▶ SPECIALIZED DECONTAMINATION CREW

The Specialized Decontamination Crew will be comprised of a foreman and 9 laborers using high pressure steam cleaners, vacuum equipment, and miscellaneous hand tools and supplies. This work crew will be tasked with the cleaning and/or removal of a variety of equipment and areas. These will include the Paint Stripping Areas, Paint Booths, Process Lines and Tanks, Ovens, Laboratory Areas, and Contaminated Ductwork.

▶ SINK, DRAIN, AND SEWER DECONTAMINATION CREW

The Sink, Drain, and Sewer Decontamination Crew will be comprised of a foreman and laborers using high pressure jetting equipment and miscellaneous hand tools and supplies.

▶ LIGHT AND BALLAST REMOVAL CREWS

Each Light and Ballast Removal Crew will be comprised of a foreman and laborers using rolling scaffolding, scissor lifts, manlifts, and forklifts. These two crews will be tasked with the removal and handling of florescent light tubes and ballasts. Florescent light tubes must be removed and sent for recycling and/or recycled on-site in a controlled manner. Light ballasts potentially contain PCBs and must be removed and sent for disposal. Both crews will operate on the same building simultaneously.

▶ MISCELLANEOUS EQUIPMENT REMOVAL CREW

The Miscellaneous Equipment Removal Crew will be comprised of a foreman and laborers using manlifts, bobcats, and miscellaneous hand tools and supplies. This crew will be tasked with removal of batteries, smoke detectors, mercury switches, and other small pieces of equipment which require removal, packaging and disposal.

▶ CFC REMOVAL CREW

The CFC Removal Crew will be comprised of a foreman and 2 laborers using forklifts, manlifts, and an Air Conditioning Refrigerant Recovery (ACRR) System. This crew will be tasked with the removal and containment for disposal of CFCs from existing site equipment.

□ DEMOLITION WORK CREWS

Several separate and distinct demolition crews will be used during performance of this project. The crews have been specialized in an attempt to increase efficiency. In general, demolition activities will proceed only after all environmental decontamination and asbestos crews have completed work. However, it is possible that hand demolition operations could occur simultaneously with environmental and asbestos operations in larger buildings where restricted work zones can be isolated.

Demolition activities for each building will be sequenced as listed below. It should be noted that utility disconnects, hand demolition, and above grade demolition have been scheduled on a building by building basis (see attached project schedule), while “hardscape” demolition activities (slab removal, foundation removal, concrete crushing) and site rough grading have been scheduled as “whole site” activities. Demolition crews will include:

► UTILITY DISCONNECT CREW

The Utility Disconnect Crew will be comprised of a foreman and 2 laborers using small backhoe and tool truck. A single utility disconnect crew will be used for this project. The utility disconnect crew will be tasked with locating, cutting and capping all utilities (water, electrical, sewer, gas, etc.) for each building prior to commencing demolition activities.

► HAND DEMOLITION CREWS

Each Hand Demolition Crew will be comprised of a foreman and 5 laborers using 2 Bobcats. Based on the attached schedule it is anticipated that there will be 1 to 2 hand demolition crews working on this project. With the number of crews varying based on work load requirements. More than one hand demolition crew will be used simultaneously on some the larger buildings at the site (see attached schedule). Hand demolition crews will be tasked with removal of trash from the interior of buildings where large equipment can not access. These crews will demolish the building interiors and place the trash outside of the buildings for subsequent loading.

► ABOVE GRADE DEMOLITION CREWS

Each Above-Grade Demolition Crew will be comprised of a foreman and 2 CAT 235 Excavators, 1 CAT 973 Track Loaders, miscellaneous laborers and a water truck. Based on the attached schedule it is anticipated that there will be 2 above-grade demolition crews working on this project with the number of crews varying based on work load requirements. More than one above grade demolition crew will be used simultaneously on some the larger buildings at the site (see attached schedule). Above-grade demolition crews will be tasked with the loading of trash removed from the building interiors by the hand demolition crews, demolition of the above-grade steel and concrete structures, segregation, sizing and stockpiling of demolition debris and recyclable materials and loading of materials for transport.

► SLAB REMOVAL CREWS

Each Slab Removal Crew will be comprised of a foreman and 1 Stomper, a CAT 973 Track Loader, a water truck, and 2 to 3 semi-end dump trucks. Based on the attached schedule it is anticipated that there will be 1 slab removal crews working on this project with the number of crews varying based on current work load requirements. More than one slab removal crew may be used simultaneously on some the larger building slabs at the site. Slab removal crews will be tasked with

the break-up and removal of concrete building slabs, segregation of concrete, stockpiling of concrete for crushing, and loading of materials for transport.

► **FOUNDATION REMOVAL CREWS**

Each Foundation Removal Crew will be comprised of a foreman and 5 laborers/operators using a CAT 235 Backhoe with Bucket, a CAT 235 Backhoe with Hydraulic Breaker, a water truck, a 973 Tack Loader, and 2 to 3 semi-end dump trucks. Based on the attached schedule it is anticipated that there will be 1 to 2 foundation removal crews working on this project. With the number of crews varying based on current work load requirements. Foundation removal crews will be tasked with the excavation break-up and removal of concrete building foundations, segregation of concrete and rebar, stockpiling of concrete for crushing, and loading of materials for transport.

► **CONCRETE CRUSHING CREW**

The Concrete Crushing Crew will be comprised of a foreman and 3 operators using the following equipment:

- CAT 988 Loader
- 8 x 20 Vibrating Screen and Simons Cone Crusher
- 30 x 42 inch Universal Jaw Crusher
- Jaw Conveyor Belt
- Starns Magnet
- Under Screen Conveyor Belt
- Return Conveyor Belt
- 4 each Extension Conveyor Belts
- 2 Each Radial Stackers
- CAT 3516 Electrical Power Generator

A single concrete crushing crew will be used for this project. The concrete crushing crew will be tasked with crushing of the concrete stockpiled by the other demolition crews.

► **UTILITY REMOVAL CREWS**

Each Utility Removal Crews will be comprised of a foreman and 4 laborers using CAT 225 Backhoe, and CAT 950 Loader. Based on the attached schedule it is anticipated that there will be 1 to 2 utility removal crews working on this project. With the number of crews varying based on current work load requirements. Utility Removal Crews will be tasked with locating, excavating, and removing underground site utilities, stockpiling of generated debris and recyclable materials and loading of these materials for transport.

► **SITE GRADING CREWS**

Each Site Grading Crew will be comprised of a foreman, CAT 623 Scraper, CAT 824 Dozer, and water truck for dust control. Site grading crews will be tasked with backfilling, and rough grading of the site following completion of all other demolition activities. No import of soil or compaction is included.

SECTION

1.7

HEALTH & SAFETY

1.7 SAFETY AND PROTECTION PLAN FOR WORKERS AND EQUIPMENT

AECI considers safety and the prevention of accidents an integral part of its operation. Under federal, state and local law **AECI** is responsible to provide training and a safe working environment, to protect life, health and safety of its employees and contractors personnel. Although providing safe working conditions is primarily a management responsibility, safety and accident prevention can be accomplished only through coordinated efforts of all employees and contractor personnel. It is the policy of **AECI** for this project as with all of our projects, that if the task or service being undertaken cannot be done safely, that work is to be stopped until proper controls can be established.

1.7.1 SAFETY & PROTECTION PLAN

Upon receiving Notice-to-Proceed, **AECI's** Health & Safety Crew will develop a Site-Specific Health & Safety Plan (HSP) detailing the site's environment and potential hazards. Every worker on the project site will be required to read and sign an acknowledgment form and follow the HSP for the duration of the project. The following discusses hazards that workers may encounter at the MDC site.

☐ **LEAD OR LEAD-RELATED MATERIALS**

The exposure to lead has become a growing concern for the demolition industry over the past ten years. It is anticipated that removal of items containing lead based paints may cause a concern for worker safety. When dealing with lead exposure, the amount of lead contaminant in the air, possible routes of entry into the body, inhalation, and ingestion are a main concern. Inhalation occurs when the lead contamination becomes airborne and the worker is not properly protected. Ingestion may occur when contamination is transferred from clothing, hands, face or hair onto the food that the employee eats or on to materials during smoking. Contamination on clothing, skin or body may also be carried by the worker into his/her home and expose other members of his/her family.

All workers will receive an initial baseline Blood Lead Level (BLL) and Zinc Protoporphyrin (ZPP) screening prior to the start of any work activities to determine whether or not they are fit to work in areas of possible lead exposure.

Only limited access will be permitted to areas that have a lead exposure possibility during the demolition activities. **AECI** will establish an air monitoring program in all areas that the possible exposure to lead may occur. Initially, one air sample will be collected for each different task in all areas. Each of these samples, taken near employee breathing zones, will be a representative sample of one complete 8-hour work shift. Then depending on the results of the initial sampling protective measures will be incorporated. **AECI's** Health & Safety Manager will determine the necessity and types of PPE required to provide worker safety. During demolition activities, a water truck will also be used to wet areas and lessen the amount of airborne contaminants.

Action Level (AL): The *action level* for lead is 30 micrograms of lead per cubic meter of air ($30 \mu\text{g}/\text{m}^3$), as an average over an 8-hour workday. If air levels are greater than the action level, then **AECI** must:

- ▶ measure the level of lead in the air every 6 months;
- ▶ inform employees in writing, the amount of lead they are exposed to;
- ▶ establish a medical surveillance program if employees are exposed to lead at levels higher than the action level for more than 30 days each year.

Permissible Exposure Limits (PEL): The *permissible exposure limit* for lead is $50 \mu\text{g}/\text{m}^3$, averaged over an 8-hour workday. Legally exposure to lead must not exceed the PEL on any day. If the air lead levels are greater than the PEL, **AECI** must:

- ▶ measure the levels of lead in the air every 3 months;
- ▶ inform employees in writing, the results of air monitoring and what will be done to reduce exposure;
- ▶ provide employees with proper respiratory protection until exposure levels have decreased;
- ▶ prohibit eating, drinking, smoking, and applying make-up in areas where the lead levels are above the PEL;
- ▶ insure that employees wash hands and face prior to eating, drinking, smoking or applying make-up;
- ▶ provide a change room, lunchroom, and shower facility for all employees working in this area.

Medical Surveillance Program

If it has been determined that exposure to lead in the air is above the action level then **AECI** must provide to their employees medical evaluations. A medical evaluation must include a full work and medical history, a complete physical examination, and laboratory tests. Two important lab tests are the *blood lead level* (BLL) and *zinc protoporphyrin* (ZPP) tests. A medical evaluation can also be requested if the employee has been exposed over the action level and develop signs or symptoms of lead poisoning.

Table 1, below describes what must be done when the amount of lead in the air or the amount in blood reaches certain levels.

TABLE 1

Situation	What Must Be Done
Before assignment to a job with an exposure at or above the AL	A medical evaluation.
Exposure to lead at or above the AL for more than 30 days per year	Test BLL and ZPP every 6 months.
A BLL of 40 $\mu\text{g}/\text{dl}$ or greater	<p>Test BLL and ZPP every 2 months until two samples in a row are less than 40 $\mu\text{g}/\text{dl}$; and</p> <p>D&M must notify employee in writing of the BLL and Medical Removal Protection Benefits; and</p> <p>A medical evaluation every year.</p>
A BLL of 60 $\mu\text{g}/\text{dl}$ or average BLL of 50 $\mu\text{g}/\text{dl}$ over the last 6 months	<p>You must be removed from areas with lead exposure until your BLL is less than 40 $\mu\text{g}/\text{dl}$; and</p> <p>Test BLL and ZPP every month.</p>

Medical Removal Protection: The medical removal protection section of the Lead Standard protects the employee if they are temporarily removed from work due to a high BLL.

Demolition Work: When working on projects that involve demolition, there is probable cause for concern when considering lead exposure in the workplace. The removal of paint from surfaces previously coated with lead-based paints and also welding or torch-cutting metals that have been painted with lead-based paints may cause releases of lead. The most effective way to protect workers is to minimize exposure through the use of engineering controls and good work practices.

Engineering Controls: A competent person should review all site operations and stipulate the specific engineering controls and work practices designed to reduce worker exposure. The engineering methods may include local and general ventilation, process or equipment modifications, material substitution, component replacement and isolation or automation. When feasible, engineering controls and work practice controls cannot reduce worker

exposure to lead to at or below $50 \mu\text{g}/\text{m}^3$, respirators must be used to supplement the continued use of engineering and work practice controls.

Respiratory Protection: Presently, in the construction industry, respirators must be used to supplement engineering controls whenever these controls are incapable of reducing airborne worker exposure to lead below $50 \mu\text{g}/\text{m}^3$.

Lead concentrations may vary substantially throughout a work shift as well as from day-to-day. The highest anticipated work concentration is to be used in the initial selection of an appropriate respirator.

Protective Clothing: The determinations on appropriate clothing depends strictly on the level of lead contamination in the air. At levels below the PEL may consist of:

- ▶ coveralls or tyvek disposable clothing;
- ▶ gloves;
- ▶ suitable eye protection;
- ▶ respirator with proper cartridges.

Disposable coveralls and separate boot covers may be used, if appropriate, to avoid the need for laundering clothing.

Non-disposable coveralls shall be replaced daily. Contaminated clothing that is to be cleaned, laundered or disposed of should be placed in closed containers. Containers shall be labeled with the following warning:

CAUTION: Clothing contaminated with Lead. Do not remove dust by blowing or shaking. Dispose of Lead contaminated wash water in accordance with applicable local, state, or federal regulations.

Persons responsible for handling contaminated clothing should be informed of the potential hazard in writing.

☐ **PCB AND PCB-RELATED ITEMS**

PCBs are potential liver toxins that may be absorbed through the skin and have been classified as a cancer causing materials. AECI anticipates contact with PCBs during removal of ballasts from light fixtures and in areas near locations of transformers. At a minimum during the removal of ballasts, we will have our employees wearing dust-fume-mist and organic vapor cartridge half-face respirators and apron and gloves of butyl rubber, neoprene, teflon or fluorocarbon rubber.

☐ ASBESTOS AND ASBESTOS CONTAINING MATERIALS (ACM)

All work on the site that is related to asbestos removal or ACM will be completed by a Certified Asbestos Contractor, please refer to Section 1.1 for details. It is anticipated that **AECI** will perform personal air monitoring and respiratory protection to those employees working with ACM. Air monitoring and Respiratory Protection protocol are detailed later in this section.

☐ EXCAVATION, TRENCHES, CONFINED SPACE

AECI will obtain a permit from Cal/OSHA on excavations greater than 5 feet deep in which employees will be required to enter. In excavations greater than 5 feet deep, the excavators shall be benched, shored, sloped or shielded to protect employees. For excavations not greater than 20 feet deep, the particular protective system design will be based on soil classification, Type A, B, C or Solid Rock. Classification will be done by a geotechnical engineer on **AECI**. In trenches 4 feet or deeper, **AECI** shall provide safe access within 25 feet of work area.

The excavations or trenches, shall have proper barriers, portable fences, barricades, signs, caution tape or delineators around edges to warn of hazards. The excavations or trenches shall be inspected after every rainstorm, earthquake or other hazard increasing event.

☐ WASTE HANDLING

All employees required to handle, package or label a hazardous waste shall have a current 40-Hour HAZWOPER Training certificate.

☐ CFC

For all unit that may still contain refrigerants (i.e., R-12, R-22) **AECI** will remove these chemicals prior to unit being disconnected and removed.

☐ HEAVY METALS

Mercury

Mercury is a highly toxic material both in acute and chronic exposures. It is known that there is mercury inside thermostats, light switches and fluorescent light tubes. Target organs include the central nervous system, eyes, skin, respiratory system liver and kidneys. PPE should consist of gloves, boots apron made of butyl rubber, nitrile, rubber, fluorocarbon rubber, neoprene, polyvinyl chloride, chlorinated polyethylene, or polycarbonate. Chemical cartridges with ESLI (end of service life indicator), supplied-air or SCBA.

❑ PROCESS TANKS AND PIPING

All process tanks and piping will be rinsed prior to removal as described in the Standard Decontamination Procedures. Employees performing tank and piping decontamination will wear appropriate PPE. Each tank will have to be evaluated for its size and previous chemical content before the work has begun. As a basic guideline the following information should be followed unless there are special circumstances:

	Clothing	Gloves	Respiratory	Eye Protection
Low pH	Tyvek/Saranex	Nitrile, Neoprene	Organic Vapor/Acid Gases/HEPA	Goggles
Solvents		Viton, 4H	Organic Vapor	Goggles
Heavy Metals*	*To be determined by Certified Industrial Hygienist			

1.7.2 PERSONAL AIR MONITORING

1. EXPOSURE MONITORING

- a. Whenever **AECI** has a workplace or work operation covered by Code of Federal Regulations (CFR) 29 CFR 1926.58 or this program we perform monitoring to determine accurately the airborne concentrations of asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals to which employees may be exposed.
- b. Determinations of employee exposure is made from breathing zone air samples that are representative of the 8-hour TWA & STEL of each employee.
- c. Representative 8-hour TWA & STEL employee exposure is to be determined on the basis of one or more samples representing full-shift exposure for employees in each work area.

2. INITIAL MONITORING

- a. **AECI** will perform initial monitoring at the initiation of each project where workers may be exposed to asbestos, tremolite, anthophyllite, or actinolite job to accurately determine the airborne concentrations of asbestos, tremolite, anthophyllite, or actinolite to which employees may be exposed.

- b. **AECI** may demonstrate that employee exposures are below the action level by means of objective data demonstrating that the product or material containing asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals cannot release airborne fibers in concentrations exceeding the action level under those work conditions having the greatest potential for releasing asbestos, tremolite, anthophyllite or actinolite.
- c. Where **AECI** has monitored similar asbestos tremolite, anthophyllite or actinolite job, and the data were obtained during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental conditions used and prevailing in current operations. **AECI** may rely on such earlier monitoring results to satisfy the requirements of paragraph (f)(2)(I) of 29 CFR 1926.58.

3. PERIODIC MONITORING WITHIN REGULATED AREAS

- a. **AECI** will conduct daily monitoring that is a representative of the exposure level of each employee who is assigned to work within a regulated area. Exception: When all employees within a regulated area are equipped with supplied air respirators operated in the positive-pressure mode, team members may dispense with the daily monitoring required by this paragraph.

4. TERMINATION OF MONITORING

- a. If the periodic monitoring required by paragraph (f)(3) of 29 CFR 1926.58 reveals that employee exposures, as indicated by statistically reliable measurements, are below the action level, **AECI** may discontinue monitoring for those employees whose exposure are represented by such monitoring.

5. METHOD OF MONITORING

- a. All samples take to satisfy the monitoring requirements of paragraph (f). All personal samples collected following the procedures specified in The Air Sampling Program.
- b. All samples taken to satisfy the monitoring requirements of paragraph (f) is to be evaluated using the OSHA Reference Method (ORM).

- c. If an equivalent method to the ORM is used, **AECI** ensures that the method meets the following criteria:
 - 1. Replicate exposure data used to establish equivalency are collected in side-by-side field and laboratory comparisons;
 - 2. The comparison indicates that 90 percent of the samples collected in the range 0.5 to 2.0 times the permissible limit have an accuracy range of plus or minus 25 percent of the ORM results with a 95 percent confidence level as demonstrated by statistically valid protocol; and
 - 3. The equivalent method is documented and the results of the comparison testing are maintained.
- d. To satisfy the monitoring requirements of paragraph (f), **AECI** relies on the results of monitoring analysis performed by laboratories that have instituted quality assurance programs that include the elements prescribed in NIOSH Method #7400, and the ORM.

6. **EMPLOYEE NOTIFICATION OF MONITORING RESULTS**

- a. **AECI** will notify all affected employees of the monitoring results that represent that employee's exposure as soon as possible following receipt of monitoring results, never more than fifteen days and all data is discussed at the employees safety meeting monthly.
- b. **AECI** will notify all affected employees of the results of monitoring representing the employee's exposure in writing either individually or by posting at a centrally located place that is accessible to affected employees.

7. **OBSERVATION OF MONITORING**

- a. **AECI** will provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos, tremolite, anthophyllite, or actinolite conducted in accordance with 29 CFR 1926.58.
- b. When observation of the monitoring of employee exposure to asbestos, tremolite, anthophyllite, or actinolite requires entry into an area where the use of protective clothing or equipment is required, the observer will be provided with and be required to use such clothing and equipment and will comply with all other applicable safety and health procedures.

1.7.3 RESPIRATORY PROTECTION

1. PRODUCT DATA

AECI will supply all workers foreman, and superintendents with personally issued respiratory protective equipment fitted with combination HEPA/Organic Vapor Cartridges when conducting asbestos abatement. The respirator meets NIOSH standards for filtering particulate from the air and is approved for respiratory protection against dusts, fumes, and mists such as airborne asbestos fibers.

2. PRODUCT USE

During work area preparation, but prior to actual removal of ACM, half face negative pressure respirators with HEPA cartridges may be used. **AECI** will provide powered air purifying respirators (PAPRs) during removal, waste removal, and encapsulation activities, through to successful work area clearance as required by accepted respiratory protection requirements. Controlled fiber counts must be maintained as specified in OSHA 29 CFR 1910.134.

Respiratory protection as specified herein will be work at all times, including preparation of the work areas, loading and unloading of waste containers in the work area or at the waste dumpster, and cleaning of work area.

Facial hairs such as beards, long sideburns, and moustaches which interfere with the seal of air purifying type respirators are prohibited.

Respiratory protection maintenance and decontamination procedures will meet the following requirements:

1. Respiratory protection will be inspected and decontaminated on a daily shift basis in accordance with OSHA 29 CFR 1910.134(b).
2. HEPA- filters for negative pressure air filtering respirators will be changed after exiting the decontamination facility.
3. Respiratory protection will be the last piece of worker protection equipment to be removed. Workers will wear respirators in the shower when going through decontamination procedures as stated herein.
4. **AECI** will furnish to the Resident Hygienist written documentation that each worker is medically approved to wear respirators and has been properly trained in their use, inspection, care, maintenance, and fitting testing pursuant to our written Respirator Plan.

5. Breathing air supply systems will conform to the USEPA NIOSH Document No. EPA-560-OPTS-86-001 (April 1986) entitled "A Guide To Respiratory Protection For The Asbestos Abatement Industry."

AECI's Respiratory Protection Program discusses the following elements:

- ▶ How asbestos is used
- ▶ Health Effects Associated with Asbestos Exposure
- ▶ The Respiratory System
- ▶ Diseases
- ▶ Administration of Respiratory Program
- ▶ Responsibilities
- ▶ Permissible Exposure Limits
- ▶ Standard Operating Procedures
- ▶ Fit Testing
- ▶ Respirator Limitations/Warnings
- ▶ Annual Respirator Program Evaluation
- ▶ Worker Documentation

3. **RESPIRATOR PROTECTION PROGRAM - TABLE BELOW:**

RESPIRATORY PROTECTION RESPIRATORS

Airborne Concentration of Asbestos, Tremolite, Anthophyllite, Actinolite, or a Combination of These Minerals	Respirator
Not in excess of 2 f/cc (10 X PEL)	1 Half-mask air-purifying respirator equipped with high-efficiency filters
Not in excess of 10 f/cc (50 X PEL)	1 Full face piece air-purifying respirator equipped with high efficiency filters.
Not in excess of 20 f/cc (100 X PEL)	1) Any powered air-purifying respirator equipped with high-efficiency filters. 2) Any supplied-air respirator operated in continuous flow mode.
Not in excess of 200 f/cc (1000 X PEL)	Full face piece supplied-air respirator operated in pressure demand mode.
Greater than 200 f/cc (1,000 X PEL) or unknown concentration.	Full face piece supplied air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus.

1.7.4 GENERAL CONSTRUCTION SAFETY

In areas where ongoing plant operations might be effected by demolition activities, temporary fencing and warning signs will be erected to eliminated the possibility of unauthorized people entering into demolition areas. Netting is proposed near Buildings 5 and 51 to reduce the potential for fugitive debris. When setting up temporary fencing, access and egress to buildings where ongoing work is taking place will be taken into account so that temporary fencing will not disrupt normal flow of traffic and work activity.

❑ SITE HEALTH AND SAFETY MEETINGS

Site safety orientation and training meetings "tail gate" will be conducted by the Health & Safety Manager or Supervisor:

- ▶ Each shift before field personnel begin work at the site.
- ▶ When there are modifications to the Health and Safety Plan.
- ▶ When workers are transferred into an unfamiliar task.
- ▶ When new workers are brought onto the project.

A record of the meetings, including attendees, will be maintained in the project Health and Safety file.

As a minimum, the orientation and training meeting agenda must include:

- ▶ A review of the Health and Safety Plan.
- ▶ Verification of medical and safety training clearances, including respirator fit testing for personnel meeting this requirement.
- ▶ Hazard awareness of chemicals and materials used or suspected to have been used on site.
- ▶ Distribution of the Health and Safety Plan or modifications.
- ▶ Attendee signatures to acknowledge receipt and understanding of the plan and an agreement to comply.

A daily safety meeting ("tailgate safety meeting") will also be conducted in the field by the Task Supervisor to review and discuss the health and safety issues associated with the work, problems encountered, and modifications to existing procedures. A record of the meetings will be kept in the project health and safety file. A copy of all site health and safety meetings and/or issues will be maintained by in AECI Field Office. All workers are required to attend these meetings.

❑ LOCKOUT / TAGOUT PROCEDURES

The establishment of Lockout / Tagout procedures is extremely important in the demolition industry and to the health and safety of our employees. Prior to removal of electrical type equipment and/or above and below ground utilities, procedures are to be

followed verifying that power sources have been disconnected. Besides the establishment of these procedures, all site employees shall be trained and made aware of lockout/tagout devices and procedures.

☐ **DISCIPLINARY ACTION PROGRAM**

AECI HSP will provide guidance for issuance of a written warning form to project employees and unsafe acts by a Subcontractor or its employees. We suggest a system of progressive discipline, beginning with verbal warnings for minor unsafe acts or conditions, written warnings for repeated minor unsafe acts or more serious violations, suspension from work and termination when justified. Employees receiving written warnings will also be subject to retraining to try an eliminate the need for further disciplinary action.

☐ **HOUSEKEEPING**

To try and eliminate slip, trip, and fall hazards as much as possible, each employee and subcontractor will be required to maintain a work area free from debris, with adequate room for walking and working areas. Due to the nature of demolition activities, good housekeeping procedures require the cooperation by all parties working on-site.

☐ **FIRE PREVENTION AND PROTECTION**

Demolition activities present a wide variety of potential fire hazards that change on a daily basis while work is in progress. This is intended not to address each possible hazard, but to state that every employee is responsible for identifying potential fire hazards and the protection of lives in the event of a fire. **AECI** is responsible to train employees concerning fire hazards and provide protection such as fire extinguishers or other means.

☐ **HEAVY EQUIPMENT OPERATION**

Working with and around heavy equipment presents a few specific hazards including noise exposure during certain demolition tasks and visibility of laborers working in and around equipment. Equipment operators and laborers be required to wear hearing protection during tasks such as slab breaking that generates high levels of noise exposure. In addition, laborers working near heavy equipment must wear highly visible vests and position themselves so that operators will know where they are working at all times. Laborers need also to remain at a safe distance from the equipment installed with outriggers. Outriggers may lift and return to the ground creating a serious hazard to feet and legs.

☐ **PROTECTION FROM SHARP OBJECTS**

Workers shall protect themselves from possible injury by sharp objects, such as glass, broken glass or metal with sharp edges by wearing abrasion resistant leather gloves and long sleeve shirts when required. The discussion of safety when working around sharp

objects will be an ongoing topic for daily tailgate safety meetings.

❑ CONFINED SPACE ENTRY PROCEDURES

It is anticipated that removal of utilities from underground vaults, decontamination of larger process tanks and other site activities could place workers in oxygen deficient atmospheres. Therefore, confined space entry procedures shall be followed.

A. Definition

A confined space is defined as any space, open or closed, in which poisonous, flammable, or otherwise incompatible vapors have been present or might accumulate, or where a deficiency of oxygen might occur and a lack of egress and access exists.

Examples: Above and below ground tanks, vaults, clarifiers, open top and closed top baker tanks, rooms that meet the above criteria, excavations, tank trucks, etc.

(Note: It is absolutely forbidden to enter a flammable atmosphere. This applies to **AECI** crews and their subcontractors.)

B. Entry Procedure

No employee of the **AECI** is to enter a confined space without a confined space entry permit. This permit must be signed by the Project Superintendent, Project Manager, person or persons entering the confined space and the standby observer. If supplied air is being utilized, then the person monitoring the air consumption will sign the permit. The signatures will acknowledge the employee's understanding of the rules for confined space (as noted on the permit) and hazards associated with the particular task.

The permit is valid only for the work shift noted. For each new shift, a new permit must be obtained. All rules and procedures outlined on each subsequent permit must be followed (i.e., atmospheric testing).

The executed permit must be displayed in a conspicuous place at the job site. The Project Manager shall retain the bottom portion of the permit. All permits will be filled out in ink.

At the end of the work shift or when the job is completed, the displayed permit will be forwarded to the **AECI** Health and Safety Manager. All permits will become part of the permanent job file.

The Project Manager has the ultimate responsibility to see that all provisions of the permit are abided by.

C. Rules

No person shall enter any confined space where a flammable atmosphere exists.

Prior to entering a tank where flammable materials have been present, the area in question and associated lines will have been washed, neutralized and purged. This will be verified by the site supervisor and health and safety coordinator before entry.

Where applicable, lock out / tag out procedures will be followed. Interconnecting lines will be blanked or disconnected. The above procedure will be verified.

No confined space will be entered without first monitoring the atmosphere for flammable vapors, toxic gases and oxygen deficiency. Atmospheric monitoring must continue for the entire entry period. All monitoring devices must be equipped with an audible alarm that sounds when the oxygen content drops below 19.5% or when the lower explosive limit (L.E.L.) is exceeded by 10%.

Atmosphere within the confined space must contain at least 19.5% oxygen to facilitate entry without utilizing positive pressure air-supplied respiratory protection or self-contained breathing apparatus.

Fresh air must be introduced into any vessel or tank to facilitate ventilation. This should be introduced near the bottom of the tank or vessel.

A rescue harness and lifeline must be worn by all employees entering the confined space.

A competent standby observer must be stationed at the entrance to the confined space the duration of the entry.

- ▶ The standby observer must be trained in first aid.
- ▶ The standby observer will be instructed in the following:
 - Location of nearest telephone or two-way radio
 - Location of nearest safety shower
 - Location of nearest fire extinguisher
 - Location of nearest first aid kit
 - Not to enter confined space for any reason
 - Knows how to report emergency
 - Standby observer's checklist (see attached)

During the entry of the confined space, the standby observer must remain in continuous contact with the worker(s). He is not to leave the entry point, except to report an emergency, until all the workers have exited the confined space.

In the event that an emergency should occur within the confined space, the standby observer should immediately sound the alarm horn. The standby observer should notify the proper emergency services once the alarm horn is sounded. Once the aforementioned is completed, the standby observer should return to the entry point to assist emergency services. He is not to enter the confined space.

A self-contained breathing apparatus or positive pressure-supplied air respirator should be on hand for every worker designated for rescue crew. (Additional employees are to be on hand to facilitate a rescue, if necessary.)

D. Additional Rules and Instructions

An observer other than the standby observer shall be assigned to monitor air supply gauges if positive pressure-supplied air breathing respirator apparatus is utilized. The air supply observer will notify the standby observer when the air gauges read <500 lbs pressure.

In addition to the confined space permit, a daily safety briefing shall be completed outlining the task and inherent hazards.

☐ SCAFFOLDING

Scaffolds must be provided for work that cannot be done safely while standing on solid construction at least 20 inches wide, except where such work can be done safely from ladders CCR Title 8 §1637(a). The below listed references have been taken from the California Code of Regulations (CCR) Title 8, Construction Safety Orders. A permit is required from CAL/OSHA for the erection of scaffolds exceeding 3 stories or 36 feet in height.

☐ TUBULAR WELDING SCAFFOLDS

These units are commercially fabricated. Panels/frames must stack or nest on each other in true alignment. 1644(c)(5)

Frame connections must be pinned. 1644(c)(6)

Tower and Rolling Scaffolds Requirements:

- ▶ The "height-to-base" must not exceed 3:1. 1646(a)
- ▶ Legs must be braced every 2 feet vertically. 1646(b)(3)
- ▶ Screw jacks must extend into the legs. 1646(b)(2)
- ▶ Frames must nest with positive-locking pins. 1644(c)(5)
- ▶ Two wheels or casters must swivel; all four must lock. 1646©
- ▶ Riding a moving scaffold is restricted. 1646(f)
- ▶ A secured fully planked platform is required. 1646(e)
- ▶ Joints shall be locked together by lock pins, bolts or equivalent fastenings. 1646(d)

STANDBY OBSERVER'S CHECKLIST

1. Valid confined space entry permit _____
2. Harness and life line used _____
3. Instruct use of life line and harness _____
4. Location of telephone or two-way radio _____
5. Knows how to report emergency _____
6. Knows location of job site and report _____
7. Knows not to leave site when employee(s)
is(are) inside, except to make emergency call _____
8. Knows NOT TO ENTER CONFINED SPACE FOR ANY REASON _____
9. Knows location of safety shower _____
10. Knows location of fire extinguisher and
how to use it _____
11. Understands operation of blower or other
fresh air source _____
12. Knows the operation of supplied air respirators
(air line and self contained) _____
13. Has all necessary equipment including alarm horn _____
14. Knows how to shut off welding/burning equipment _____
15. Hazards of job and methods to safely perform
work explained _____

❑ MOBILE LADDER STANDARDS AND SCAFFOLDS (TOWERS)

The design of these units must conform to the General Requirements for scaffolds, except as follows:

- ▶ The "height-to-base" must not exceed 3:1 (including outriggers). 3622(f)(1)
- ▶ Minimum platform- (mobile scaffolds: 20 inches) 3622(f)(2)
(ladder step width: 16 inches) 3622(f)(2)
- ▶ The structure must be rigidly braced with cross bracing, diagonal bracing, and secured platforms. 3622(f)(3)
- ▶ Applicable Tower and Rolling scaffold rules apply. 1646
- ▶ Wooden pole scaffolds over 60 feet in height must be designed by a registered civil engineer. 1643
- ▶ Mobile work platforms must be adequately "diagonally braced". 3626©
- ▶ Mobile ladder stands must be designed as follows:
 - Rise - 9 to 10 inches 3627©
 - Step Depth - 7 to 10 inches 3627©
 - Slope of Ladder - 55 to 60 DEG 3627©
 - Units with steps having four or more risers require handrails. 3726(d)

❑ SUSPENSION (SWING) SCAFFOLDS

Most swing scaffolds have a two-point suspension; the platform is supported by hangers or stirrups. Each wire is suspended from a separate outrigger beam or thrustout. 1658(k)

The scaffold must be inspected daily and tested frequently. 1658(g)

All hoisting mechanisms and metal platforms must meet nationally-recognized standards. 1658(a)

Outrigger beams must be secured in a saddle and anchored at one end to solid structure. The inboard end must be tied back. 1658(j)

The beam must be capable of supporting four times the intended load. 1658(j)(1)

Ordinary ladder platforms are prohibited. 1658(d)

Load limit: 1 person for each suspension rope. 1660(a)

Insulated wire suspension rope is required when welding, sandblasting or using acid/corrosive solutions. 1658(f)

Separate safety belts and lifelines are required for each worker. 1658(I)and 1660(g)

Platform (loads between 425 and 1000 lbs.): 1661(a)

- ▶ width - 14-36 inches. 1660(d)
- ▶ width - for cement masons (min. 24") 1661(b)
- ▶ span - 10 feet (2 x 10-inch planks) 1660(e)
- ▶ span - 12 feet (2 x 12-inch planks) 1660(e)
- ▶ bolster (ledger) - 2 x 4-inch cross-section 1660(c)

☐ SUSPENDED BRICKLAYER'S OR MASON'S SCAFFOLDS

Swing scaffold rules apply except:

- ▶ Outrigger or thrustout strength must be equivalent to a 15-foot long 7-inch steel "I" beam (15.3 pounds/foot) 1659(a)
- ▶ Platform - 4 feet wide 1659(e)
- ▶ Bolster material - 4 x 6 inches (cross-section) 1659(c)
- ▶ Load - 50 psf (maximum) 1659(h)

Note: A registered professional engineer must design the scaffold if greater loads are used. 1659(h)

☐ POWERED SUSPENDED SCAFFOLDS

The general rules for swing scaffolds apply except as listed below:

- ▶ Platform width - 20-inches (minimum) 1667(d)
- ▶ Railings are required on open sides and ends, and on all sides if the scaffold is suspended by one rope. 1667(a)
- ▶ Load limit - 425 pounds with ladder-type platform. 1667(b)
- ▶ Controls must be of the "dead-man" type. Load release units for fast descent are prohibited. 1667(f)

☐ INTERIOR HUNG SUSPENDED SCAFFOLDS

This scaffold is a wood or steel tube and coupler type, suspended from a ceiling or roof structure. 1665(a)

General and suspended scaffold rules apply except:

- ▶ Suspension ropes must be wrapped twice around supporting members and ledgers. 1665(b)
- ▶ Ends of wire rope must be secured with three clips. 1665(b)

☐ FLOAT SUSPENDED SCAFFOLDS

- ▶ This scaffold is intended for work such as welding, riveting and bolting. 1663(a)
 - ▶ Platform size: 3 feet x 6 feet x 3/4-inch plywood. 1663(a)(1)
 - ▶ Rope: 1-inch diameter manila (minimum). 1663(a)(4)
 - ▶ Load limit: 3 people. 1663(a)
 - ▶ Safety belts and separate lifelines are required. 1663(a)(5)
- ❑ BOATSWAIN'S CHAIR
- ▶ The use of this chair requires training or experience. 1662(a)
 - ▶ Platform size: 10 inches x 24 inches x 2 inches (minimum). 1662(I)
 - ▶ Rope: 5/8-inch diameter manila. 1662(k)
 - ▶ Rope: 3/8-inch diameter protected wire for welding. 1662(j)
 - ▶ Safety belts and separate lifelines are required. 1662(c)
 - ▶ Area below must be barricaded. 1662(b)
- ❑ NEEDLE BEAM SCAFFOLDS
- ▶ Beam size: 10-foot length x 4 x 6-inch cross-section. 1664(a)(1)
 - ▶ Rope: 1-1¼ inch diameter manila. 1664(a)(4)
 - ▶ Note: Scaffold hitch (knot) must be used. 1664(a)(5)
 - ▶ Safety belts are required. 1664(a)(12)
- ❑ OUTRIGGER SCAFFOLDS
- ▶ Brackets or beams must be anchored or braced against turning, twisting or tipping. 1645(a)(1)
 - ▶ Light trades platform: (2-inch x 10-inch planks) 1640(a)(5)
 - ▶ Heavy trades platform: Two planks (2-inch x 10-inch) 1645(a)(2)
 - ▶ Beam size: 3-inch x 12-inch cross-section (minimum) 1645(a)(2)
 - ▶ Beam length: outboard of fulcrum - 6 feet (maximum) 1645(a)(1)
 - ▶ Beam length: inboard of fulcrum - 1½ times outboard section 1645(a)(1)
 - ▶ Note: Multi-level units must be designed by a registered professional engineer. 1645(a)(3)
- ❑ BRACKET SCAFFOLDS (LIGHT TRADES)
- ▶ Brackets must be bolted through walls or secured to bolted-through **walers** or welded to tanks. 1645(d)
 - ▶ Platform: 20 inches x 10 feet (minimum).
 - ▶ Carpenter's type load limit: 2 workers and 75 pounds of equipment. 1645(e)(4)

❑ **HORSE SCAFFOLDS**

Platform width:

- ▶ Light Trades - 20 inches (10 inches if less than 4-feet high).
- ▶ Heavy Trades - 4 feet (minimum).

1647(e)(2)

❑ **ELEVATED WORK AREAS**

When removing lighting, piping and other materials from elevated areas **AECI** will be using scissor lifts with appropriate guardrails and toe boards. Laborers completing the work will be tied off with belts and lanyards. The employees will be trained in the proper use of this equipment and the specific manufacturer specification limits for weight and operation.

For all other elevated work not requiring a scissor lift, all precautions will be observed for fall protection such as use of guardrails, toe boards, belts, lanyards and/or safety nets.

SECTION 1.8

CONDITIONS AND EXCLUSIONS

1.8 EXCEPTIONS AND CLARIFICATIONS

1.8.1 ABATEMENT CONDITIONS AND EXCLUSIONS

1. Should Owner or Owner's representative sub-contract outside services which may impact our work, we shall required indemnification by the Owner or their representative.
2. Should Owner select a representative for this work who required modification to the plan which LVI has submitted, we reserve the right to alter the price accordingly.
3. All proper and required notifications to the City, State, and Federal government shall be made prior to mobilization by LVI. Appropriate documentation will be made to all parties.
4. All building permits shall be the responsibility of the Owner or Owner's representative unless specified in the Contract/Agreement. LVI's price is inclusive of AQMD and City asbestos related permits.
5. Owner shall provide an EPA and State identification numbers for proper manifestation and disposal of the asbestos waste.
6. Hauling shall be provided only by licensed special waste haulers and all waste shall be disposed of in federally licensed EPA approved landfills. Burial manifests shall be submitted to the Owner for his records. For this project, LVI has selected Falcon Disposal with waste being shipped to BKK Landfill.
7. Air monitoring will be performed by an independent company and shall be paid for by the Owner.
8. LVI shall be responsible for personal OSHA monitoring only.
9. No tenants shall have access to the building during demolition or abatement.
10. Owner shall make available a adequate parking and storage area for equipment and material for the duration of the project.
11. The Owner shall provide the necessary utilities for the work required, which includes sufficient hot and cold water pressure, drains, electricity, and toilet facilities.
12. The Owner shall identify all electrical runs that shall remain live during the abatement process.
13. Elevator service is to be provided by other free of charge. This is inclusive of any necessary service/repair required during the course of our work.

14. The Owner must remove all moveable items from the work area prior to the commencement of our work.
15. All chemicals found in the building will be identified and disposed of according to all Local, State, and Federal laws or codes at the Owner's expense before abatement begins.
16. Damage to piping, electrical conduit or any other lines or equipment within the work area caused by, or as a result of, an advanced state of deterioration or neglect shall not be LVI's responsibility.
17. LVI shall not be responsible for damage to walls, floors, ceiling, paint fixtures, etc., unless specified in the Contract/Agreement.
18. It has been assumed that the ductwork and breaching will be at ambient temperature during the course of work.
19. All ceiling tiles shall be disposed of as construction debris.
20. The lights are to be HEPA vacuumed, cleaned and disposed of as construction debris.
21. No disposal of general construction debris has been included other than reasonable waste generated by LVI's base scope of work.
22. Composition roofing will be removed to insulation board only. If insulation boards exist, they will be left in place for re-use or disposal by others.
23. All work shall take place between 7:00 a.m. Monday and 3:30 p.m. Friday, unless specified in Contract/Agreement.
24. The price is based upon working straight time, unless otherwise stated.
25. The cost to provide a fire watch or security is not included.
26. PCB containing ballast from fluorescent lights is not included.
27. Lead Base Paint removal is not included.
28. LVI's price has been based upon the attached plan of action, and acceptance of our bid is solely contingent upon same. We have reviewed the project site and our proposed procedures have been upon practices which remain within SCAQMD, EPA and OSHA criteria.

1.8.2 ENVIRONMENTAL CONDITIONS AND EXCLUSIONS

1. This bid proposal assumes that all transformers and transformer contents are not contaminated with polychlorinated biphenyls (PCB) and can be recycled at a permitted recycling facility. Hazardous waste disposal, incineration, and/or fuels blending is excluded.
2. Light ballasts are assumed to be PCB impacted and require disposal at a permitted TSCA Class I disposal facility. This bid proposal excludes incineration of the PCB impacted light ballasts.
3. Fluorescent lights and mercury containing switches will be recycled at a State of California permitted recycling facility.
4. This bid proposal assumes that decontamination of the various tanks and process equipment will consist of one (1) pass of the decontamination equipment. Sampling of the generated rinsewater is included and it is assumed that the generated rinsewater will be discharged into the existing sanitary sewer system. Hazardous waste disposal, incineration, and/or fuels blending of the rinsewater is excluded.
5. Decontamination of the sanitary sewer system, associated with the Phase I demolition, will consist of one (1) pass through the main laterals with a high pressure jetting system.
6. Emergency batteries are assumed to be recycled at a State of California permitted recycling facility.
7. This bid proposal assumes that purging of gas lines will be completed with compressed air only. Purging of the lines with water and/or inert gases is excluded.

1.8.3 DEMOLITION CONDITIONS AND EXCLUSIONS

1. Grading of the site to any specific contour, import of deficit fill materials, geotechnical inspections, government inspections is excluded.
2. Removal or handling of unknown materials is excluded.
3. Delays due to others or beyond AECE's control are excluded.
4. Electrical and water will be provided by the owner.
5. No restriction of work hours.
6. Onsite security will be provided by the owner.

7. **AECI** has rights to all salvageable materials with exception of the equipment to be removed by owner.
8. Removal of existing utilities is excluded, unless specified at a later date for a negotiated amount. Included in scope of services is a general description of the methods and procedures if required at a later date.

This proposal assumes that the project shall be awarded within 6 months of submittal.

SECTION 2.0

SECTION 2.0

PROJECT ORGANIZATION AND STAFFING

SECTION 2.0

PROJECT ORGANIZATION AND STAFFING

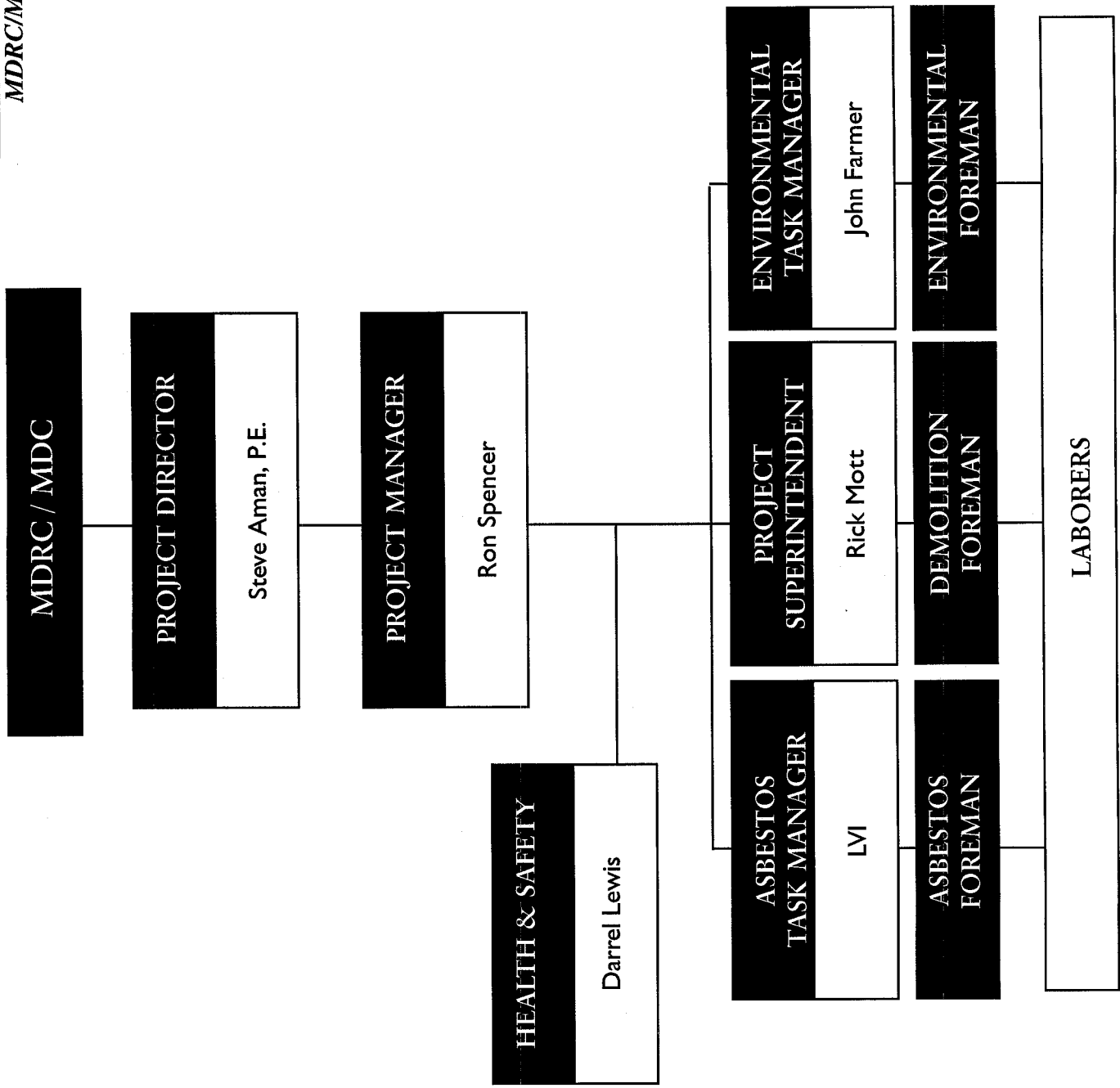
To prepare for this project, **AECI** has studied the various aspects of the proposed demolition and clean up and has assembled a team of professionals, including demolition professionals, environmental professionals and remediation professionals technically suited to successfully perform each task of the MDC project. **AECI** has a commitment to excellence and responsiveness to ensure that this project will be completed in an *environmentally sound manner, within schedule and on-budget*.

AECI has a record of successfully completing projects on time, within budget and with sensitivity to our client's environmental concerns. For this project, we have selected a team of highly qualified, seasoned professionals specializing in large plant demolition and closures, regulatory and permitting services, environmental services and transportation services. In addition, each member is trained to meet the requirements of OSHA 29 CFR 1910.120. Our proposed project team is presented in Figure 2.1. Each member listed has extensive experience to efficiently and effectively complete this project in a responsive manner.

In addition, **AECI**, along with its parent company, has over 700 hundred California-based professionals (scientists and engineers as a resource should their expertise be needed on the project. Every team member, regardless of discipline, is committed to be responsive to MDC's needs.

Brief descriptions of our team members follow and detailed resumes are presented in Appendix A of this proposal.

FIGURE 2.1
TEAM ORGANIZATION
MDRC/MDC Torrance C-6 Facility



STEVE M. AMAN - PROJECT DIRECTOR

2.1 PROJECT TEAM

AECI recognizes the complexity of this project due to the detailed scope required and extensive regulatory permits needed to perform the project tasks. We therefore have placed Mr. Steve M. Aman, P.E. as Project Director. Mr. Aman is a leading expert in construction management services, and has over 15 years of engineering and construction related experience. Mr. Aman will ensure that his team is dedicated to completing this project on time, within budget, and through their understanding of the federal, state and local requirements.

Mr. Aman has extensive experience in the general engineering and construction industry and is a registered Civil Engineer in the State of California. Over the past 15 years, his diversified construction background was gained with a commitment to "value engineering construction." Mr. Aman has been directly responsible for all phases of civil and remedial construction activities including mass grading, demolition works, installation of storm drains, sewers, water lines, fine grade, base and paving projects, UST removals, bioremediation, load, haul & dispose of hazardous materials, landfill closures, industrial plant closures, decontamination of facilities and materials recycling.

Mr. Aman is currently responsible for the overall management of general construction and remediation activities and is associated with over 300 successfully completed projects. Relevant experience includes:

- **Industrial Plant Closure, Newport Beach, CA:** Scope of work includes asbestos abatement of 15 building structures, removal of regulated wastes such as mercury vapor lites, fluorescent lights, PCB transformers, power blast PCB stained concrete, cleaning of industrial piping and sewer lines, purge and drain all systems. Demolition of 1.2 million sf. of industrial and office building structures which include salvage of ferrous and non ferrous materials, removal and disposal of organic debris, removal and recycling of 85,000 tons of concrete and asphalt materials, removal of the underground utilities, excavation of contaminated soil after demolition, backfill and compaction of excavations, mass grade the entire site with movement of over one million cubic yards of earth material, fine grade the entire site for residential lots.
- **Demolition Project, Armco Steel Foundry, Torrance, CA:** Scope of work consisted of the demolition of the Armco Steel Foundry, a 30-acre site used for foundry and warehouse purposes. Buildings demolished consisted of 850,000 sf. of large steel framed structures, removal of 50,000 cy. of concrete foundations, crush and recycle concrete as asphalt pavement materials for use as road base material, removal of all underground utilities, mass grade the entire site.
- **Demolition Project, Trammel Crow, Commerce, CA:** Scope of work consisted of the demolition and clearing of a 100-acre site operated by the U.S. Steel Foundry in Commerce, Ca., removal of 100,000 cy. of concrete foundations, mass grade site for industrial complex consisting of over two million sf. of new construction, installation of all new roads, parking areas, underground improvements complete.

- **Demolition Project, American Honda Motor Corporation, Torrance, CA:** U.S. Steel Corporation contracted our services to U.S. Steel Foundry. Scope of work consisted of demolition and removal of all buildings and foundation associated with U.S. Steel Foundry located in Torrance, California. The work consisted primarily of removing and disposing of over 60,000 cy. of buried concrete as well as complete subsurface remediation of the 65-acre site. This involved removal of the concrete and sizing the material to accommodate processing through a portable crusher to make road base material. The material was then disposed of off-site. Aman was also responsible for the crushing and processing of over 250,000 tons of slag material to manufacturer slag base material. In addition, we removed and recompacted over 1,500,000 tons of slag material to facilitate future construction. The project also required remediation of over 25,000 tons of heavy metal contaminated sediment pond material. Aman was responsible for the excavation, profiling and disposal of this material at an approved Class I disposal facility.
- **Industrial Plant Closure, Honeywell, Gardena, CA:** Project Director of an industrial plant closure in Gardena, Ca., including demolition and land clearing of a 15-acre industrial plant. A 300,000 sf. manufacturing plant was demolished, asbestos materials removed, PCB ballasts and fluorescent lights removed and packaged for disposal, 25,000 tons of concrete and asphalt pavement recycled and sold as recycled base material, five USTs' cleaned and removed, 35,000 tons of contaminated materials excavated and disposed of off site, excavations backfilled and compaction certified, import 35,000 tons of clean fill, and mass grade the entire site.
- **Industrial Plant Closure, Anchor Glass, Vernon, CA:** Project Director of an industrial plant closure in Vernon, Ca. including demolition and associated environmental remediation to obtain regulatory agency site closure. Demolition consisted of over 400,000 sf. of miscellaneous concrete, steel and brick construction, decontamination of high pH batch materials from existing silos', excavation and removal of hydrocarbon contaminated soil, transportation and off site disposal of over 10,000 tons of hazardous materials, backfill and compact all excavations, import of clean fill and finish grade the entire site.
- **Explosive Ordnance (UXO) Location, Removal and Site Closure, Chino Hills, CA:** Project Administrator responsible for the location, identification, removal detonation and processing of unexploded ordnance and soils contaminated with TNT and RDX. Work includes the excavation, screening, processing of contaminated soil, QA/QC testing and certification of the soil as "clean" and closure of the site to meet agency standards.

RON SPENCER - PROJECT MANAGER

Mr. Spencer will serve as Project Manager for this project. As such, he will serve as the primary point of contact for decontamination and demolition services throughout the duration of the project. He will also serve as the primary point of contact for issues associated with documentation, billing, and customer service throughout all task assignments. Mr. Spencer is uniquely suited for this position because of his recent project experience with a multi-million dollar facility plant demolition which required daily client interface, subcontractor and schedule coordination and multiple administrative duties.

Mr. Spencer has over eight years of project management experience in the construction industry. Areas of expertise include estimating, project scheduling and cost control, as well as project development and coordination for demolition projects. Relevant experience includes:

- **Industrial Plant Closure, Newport Beach, CA:** Project Manager responsible for the coordination and supervision of all hazardous waste and decontamination services, asbestos abatement, mass demolition and rough grading of a 100-acre site. Scope of work includes asbestos abatement of 15 building structures, removal of regulated wastes such as mercury vapor lites, fluorescent lights, PCB transformers, power blast PCB stained concrete, cleaning of industrial piping and sewer lines, purge and drain all systems. Demolition consists of 1.2 million sf. of industrial and office building structures which include salvage of ferrous and non ferrous materials, removal and disposal of organic debris, removal and recycling of 85,000 tons of concrete and asphalt materials, removal of the underground utilities, excavation of contaminated soil after demolition, backfill and compaction of excavations, mass grade the entire site with movement of over one million cubic yards of earth material, fine grade the entire site for the construction of approximately 500 luxury homes.
- **Asbestos Management, Various Locations, CA:** Project Manager responsible for the coordination and supervision of all asbestos abatement removal at various Los Angeles County Sheriff Stations and Court Houses.
- **Demolition Project, Mobil Oil Facility, Torrance, CA:** Project Manager responsible for the coordination and supervision for the demolition of the former Coke plant area located at the Mobil Oil Corporation's Torrance Refinery. Was trained and certified through the Mobil Oil Health & Safety course.
- **Demolition Project, Emerson Electric, Upland, CA:** Project Manager responsible for the coordination, permit process and closure of a 50-acre facility in Upland, California. The project consisted of Asbestos Abatement, removal of below ground septic tanks and cess pools, removal, packaging and disposal by incineration of PCB ballasts. The project was turned over to the Owner for redevelopment.

JOHN FARMER - ENVIRONMENTAL TASK MANAGER

Mr. Farmer, will serve as Environmental Task Manager for this project. Mr. Farmer will be responsible for the in-house project management / coordination of environmental activities related to hazardous waste handling and removal. He will also oversee the decontamination of various sub-surface and above-ground structures and/or buildings. Mr. Farmer will also assist in the coordination and declination of hazardous waste materials, labeling, waste hauler coordination and coordination of third party analysis with Owner's representative.

Mr. Farmer has over 12 years experience in the environmental field including profiling procedures and transportation, wastestream evaluation and classifications, permitting, and governmental and regulatory interface. In his present position, Mr. Farmer's responsibilities include estimating, bid development, profiling and related customer service and agency interface. In addition, Mr. Farmer provides overall project management for various remediation projects such as coordinating the removal and disposal/recycling of State and Federally regulated building materials and wastes. Other project experience includes labpacking, drum work, underground storage tanks (UST) removals, excavation, infill and grading. A selection of projects for which Mr. Farmer has provided various project management and coordination responsibilities include:

- **Demolition Project, Silicon Systems, Inc., Tustin, CA:** Scope of work involved the evaluation and decontamination of various poisonous process gases and acids utilized in the research and development and fabrication of semi-conductors. Impacted areas consisted of gas cabinets and associated process lines (stainless, plastic), various acids including hydrofluoric (HF) waste lines, solvent and HF underground storage tanks, and miscellaneous storage tanks. Decontamination and demolition of the facilities exhaust scrubber system (i.e. blowers, fans, scrubber units, and ducting), which was impacted by low pH residue and arsenic compounds. Demolition of various support equipment (i.e., boilers, cooling towers, baghouse) and below grade concrete foundations.
- **Industrial Plant Closure, Newport Beach, CA:** Environmental Task Manager responsible for the coordination and removal of various wastestreams and regulated building materials. Environmental aspects include removal of 43 miles of florescent light tubes and associated PCB containing light ballasts, handling of low/high voltage radioactive smoke detectors, recycling of mercury containing electrical equipment and various lead acid and emergency lights and (nickel-cadmium) batteries. Decontamination was conducted on PCB and Non-PCB contaminated surfaces by utilizing scarification operations and high pressure cleaning respectively. All generated fluids and solids were containerized and evaluated for on-site or off-site disposal.
- **Industrial Plant Closure Project, Peerless Pump Company, Vernon, CA:** Project Manager responsible for the demolition and environmental remediation of former foundry facility occupying 3.75 acres in Vernon, Ca. Contaminants at site include asbestos, RCRA and Non-RCRA hazardous waste solids containing heavy metals, polynuclear aromatics, and solvents. Also conducted UST removal and backfill activities.
- **Remediation Services, CAMSCO Foundry, West Covina, CA:** Project Manger responsible for the excavation and Chemical Fixation (on-site) of approximately 3,000 cubic yards of heavy metal contaminated foundry sand. Confirmatory sampling and analysis. Transportation and Disposal of treated material to an approved landfill facility.

RICK MOTT - PROJECT SUPERINTENDENT

Mr. Rick Mott will be the assigned Project Superintendent for this project. He will be the onsite supervisor responsible for directing field crews and equipment, as well as supervising the field activities of all subcontractors used onsite.

Mr. Mott has over 20 years experience estimating and managing various types of demolition projects. He has experience in directing on-site construction activities involving removal and replacement of stormdrain facilities, concrete and asphalt pavement, street reconstruction, and construction of water and waste management systems. He has provided on-site management and coordination for major projects including subcontractor procurement and coordination, planning and supervision of work activities, and health and safety monitoring. Relevant experience includes:

- **Industrial Plant Closure, Newport Beach, CA:** Superintendent responsible for the coordinating and planning work activities, procure men and equipment, monitor work area safety, track job costs and improve operational methods, communicate changed conditions to project manager and coordinate subcontractors activities. Scope of work includes asbestos abatement of 15 building structures, removal of regulated wastes such as mercury vapor lites, fluorescent lights, PCB transformers, power blast PCB stained concrete, cleaning of industrial piping and sewer lines, purge and drain all systems. Demolition consists of 1.2 million sf. of industrial and office building structures which include salvage of ferrous and non ferrous materials, removal and disposal of organic debris, removal and recycling of 85,000 tons of concrete and asphalt materials, removal of the underground utilities, excavation of contaminated soil after demolition, backfill and compaction of excavations, mass grade the entire site with movement of over one million cys. of earth material, fine grade the entire site for the construction of approximately 500 luxury homes.
- **Industrial Plant Closure, U.S. Steel Foundry, Torrance, CA:** General Superintendent responsible for demolition and removal of all buildings and foundations associated with U.S. Steel Foundry located in Torrance, California. The work consisted primarily of removing and disposing of over 60,000 cubic yards of buried concrete as well as complete subsurface remediation of the 65 acre site. This involved removal of the concrete and sizing the material to accommodate processing through a portable crusher to make road base material. The material was then disposed of off-site. Mr. Mott was responsible for the crushing and processing of over 250,000 tons of slag material to manufacture slag base material. Over 1,500,000 tons of slag material was removed and recomacted to facilitate future construction. The project also required remediation of over 25,000 tons of heavy metal contaminated sediment pond material. The contaminated material was excavated, profiled and disposed of at an approved Class I disposal facility.
- **Industrial Plant Closure, U.S. Steel Foundry, Commerce, CA:** General Superintendent responsible for the demolition and clearing of a 100-acre site operated by U.S. Steel as a foundry in Commerce, California. The work consisted of demolishing and removing over 100,000 cubic yards of concrete and asphalt materials which were recycled on-site and used in the subsequent development of the property. Also contracted for the

complete site improvements as it relates to the grading, stormdrain, sewer and miscellaneous utilities, street improvements and parking lot paving for the new industrial improvement involving some 2,000,000 square feet of tilt up construction.

- **Reconstruction of Artesia Boulevard, City of Cerritos, CA:** Superintendent responsible for the demolition and reconstruction of 5 miles of Artesia Boulevard in the City of Cerritos. Duties included directing all on-site construction activities. Removal and replacement of stormdrain facilities, concrete and asphalt pavement, domestic water and waste management system, coordinated subcontractor scheduling, conducted quality inspection and prepared reports for corporate office.
- **Reconstruction of Katella Avenue, City of Stanton, CA:** Superintendent responsible for the demolition and reconstruction of Katella Avenue in the City of Stanton. Duties included directing all on-site construction activities. Removal and replacement of stormdrain facilities, concrete and asphalt pavement, domestic water and waste management system, coordinated subcontractor scheduling, conducted quality inspection and prepared reports for corporate office.
- **Reconstruction of Garden Grove Boulevard, City of Garden Grove, CA:** Superintendent responsible for the demolition and reconstruction of Garden Grove Boulevard in the City of Garden Grove. Duties included directing all on-site construction activities. Removal and replacement of stormdrain facilities, concrete and asphalt pavement, domestic water and waste management system, coordinated subcontractor scheduling, conducted quality inspection and prepared reports for corporate office.

DARREL LEWIS - HEALTH & SAFETY MANAGER

Mr. Darrel Lewis will act as On-Site Health & Safety Manager and will be responsible for conducting on-site safety audits which will address both demolition and environmental issues as the project progresses. Mr. Lewis will ensure that all personnel allowed access to the site, including regulatory agencies and be aware of all potential hazards of current site activity. He will participate in daily "tail gate" safety meetings and present safety concerns or procedures. All personnel will follow guidelines set-up in the Site Specific Health & Safety Plan. Mr. Lewis will ensure all personnel to have had necessary training, establish and maintain medical surveillance program, if required, post all required OSHA mandated posters, perform site audits, and retain authority to stop work when unsafe conditions exist. He will coordinate all proper PPE, air monitoring, regulations and all site activities, and provide interface with the regulatory agencies, property owner, and management.

Mr. Lewis is a professional Health & Safety Coordinator with over 10 years experience working in the environmental services field. Mr. Lewis is experienced in all facets of worker safety, emergency response, Quality Assurance / Quality Control, and environmental / regulatory compliance. Relevant experience includes:

- **Industrial Plant Closure, Newport Beach, CA:** Health & Safety Officer responsible for the monitoring and safety activities for the Ford Loral Facility. Scope of work included asbestos abatement of 15 building structures, removal of regulated wastes such as mercury vapor lites, fluorescent lights, PCB transformers, power blast PCB stained concrete, cleaning of industrial piping and sewer lines, purge and drain all systems. Demolition consisted of 1.2 million sf. of industrial and office building structures which included salvage of ferrous and non ferrous materials, removal and disposal of organic debris, removal and recycling of 85,000 tons of concrete and asphalt materials, removal of the underground utilities, excavation of contaminated soil after demolition, backfill and compaction of excavations, mass grade the entire site with movement of over one million cys. of earth material.
- **Site Safety Officer, Underground Tank Removals, Edwards AFB, CA:** Review site specific health & safety plan and OSHA regulations to insure that our employees and our subcontractors are complying with all requirements. Conducts daily safety meetings, perform air monitoring for employee exposure, order Personal Protective Equipment and file all necessary reports. Address all Health & Safety issues, establish and maintain MSDS book and research regulations to maintain compliance. Deal directly with the Army Corps of Engineers, Base Environmental Health & Safety Personnel and Kern County Environmental Health Specialist.
- **City Hall, Seismic Retrofit, San Francisco, CA:** Develop site Health & Safety plan, complete chemical inventory and establish and maintain required MSDS book. Interface with main contractor safety personnel to insure that we are complying with all regulations. Establish a medical surveillance program for lead exposure. Insured that OSHA posters are posted and proper personal protective equipment is being ordered. Complete site audits, review paperwork, training records, plans and site inspection of work being performed.

- **Demolition Services, Phase 1A Kearny Mesa Facility, San Diego, CA:** Onsite Safety Manager for the demolition, decontamination and abatement of 21 structures at the General Dynamics Facility.
- **Environmental Compliance Specialist, Hartwell Corporation, Rancho Cucamonga, CA:** Responsible for all hazardous materials management, environmental compliance, health & safety training of workers, pollution prevention programs, liaison with all regulatory agencies. Reviewed, coordinated and maintained all permits for the manufacturing facility. Responsible for the review of employees exposure to chemicals and provided the proper personal protective equipment. Member of the safety committee and conducted periodic facility inspections, maintained compliance reports and plans.

2.2 SUBCONTRACTOR

AECI plans to subcontract out Asbestos Abatement services to a qualified and well-experienced abatement contractor. AECI has worked with LVI for the abatement of asbestos and lead on numerous facility closures and is confident that our team will benefit the MDC project. LVI is dedicated to completing the abatement the scope of services as required and in compliance with current regulations.

2.3 REFERENCES

AECI is a leader in the demolition industry and is proud of the earned reputation as an efficient and economical environmental contractor. We invite you contact any of those individuals listed below to inquire about our past project performance.

- | | |
|---|---|
| <input type="checkbox"/> Mr. Jack Douglas, Jr.
Koll Construction, Inc.
Facility Demolition
(714) 310-594-5577 | <input type="checkbox"/> Mr. Bill Sexauer
Hubert, Hunt & Nichols
Seismic Retrofit / Demo Services
(415) 863-3120 |
| <input type="checkbox"/> Mr. Jim Sheehy
Strohs Brewery Company
Demolition Services
(313) 446-3052 | <input type="checkbox"/> Eric J. Pearson, P.E.
Ford Motor Land Services, Corp.
Demolition Services
(313) 323-7813 |

SECTION 3.0

SECTION

3.0

BID FORM

SECTION 3.0 BID FORM

From our understanding and knowledge of this project, **AECI** has developed the following bid estimates to accomplish the work presented in our Technical Approach, Section 1.0. These estimates are based on our experience with similar projects in California and our review of the project scope. These fees will not be exceeded unless unusual conditions are encountered and we receive prior authorization to complete the additional work.

MOBILIZATION:	\$190,000.00
DEMOLITION / ENVIRONMENTAL SERVICES:	\$653,000.00
ASBESTOS ABATEMENT SERVICES:	\$535,000.00
<hr/>	
TOTAL ESTIMATE:	\$1,378,000.00

SECTION 4.0

INSURANCE COVERAGE & BONDING

SECTION 4.0 INSURANCE COVERAGE / BONDING

4.1 INSURANCE

Included herewith is our general certificate of insurance outlining our team's general liability. **AECI** does have \$10 million of general liability and can guarantee MDC \$5 million in asbestos occurrence-based insurance. Should **AECI** require additional coverage in any area to complete the scope of work, we are prepared to meet the additional needs of the MDC project.

4.2 BONDING

At present, **AECI** has a bonding capacity of \$25,000,000+ arranged with American International Group.

Broker:

Mike Parizino
Willis Corroon of Orange
1551 Tustin Avenue, Suite 1050
Santa Ana, Ca 92701
(714) 953-9521
(714) 953-6888 fax

Bonding Company:

Keith W. Newell
American International
777 South Figueroa Street
Los Angeles, Ca 90017
(213) 689-3500

CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)
12/28/94

PRODUCER

Willis Corroon Corporation of Wisconsin
330 East Kilbourn Ave., Suite 1400
Milwaukee, Wisconsin 53202

Contact: Sally Ryan

CODE

SUB-CODE

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW

COMPANIES AFFORDING COVERAGE

COMPANY LETTER	A	National Union Fire Ins. Co. of Pittsburgh, PA
COMPANY LETTER	B	American Home (Canadian)
COMPANY LETTER	C	
COMPANY LETTER	D	
COMPANY LETTER	E	

INSURED

Aman Environmental Construction, Inc.
614 East Edna Place
Covina, California 91723

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOT WITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	ALL LIMITS IN THOUSANDS
A B	GENERAL LIABILITY	GL542 - 6085 GL542 - 6080 (CANADIAN)	1/1/95	1/1/96	GENERAL AGGREGATE (\$ 500
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				PRODUCTS-COMP/OPS AGGREGATE (\$ 500
	<input checked="" type="checkbox"/> CLAIMS MADE				PERSONAL & ADVERTISING INJURY (\$ 500
	<input checked="" type="checkbox"/> OWNERS & CONTRACTOR'S PROT.				EACH LOSS (\$ 500
	<input checked="" type="checkbox"/> CONTRACTUAL LIABILITY				WATER & FIRE LEGAL LIABILITY (\$ 500
A B	AUTOMOBILE LIABILITY	CA542 - 6086 (All States Except TX) CA542 - 6087 (TX) CA542 - 6081 (CANADIAN)	1/1/95	1/1/96	COMBINED SINGLE LIMIT (\$ 500
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) (\$
	<input checked="" type="checkbox"/> HIRED AUTOS				BODILY INJURY (Per accident) (\$
	<input checked="" type="checkbox"/> NON-OWNED AUTOS				PROPERTY DAMAGE (\$
	<input checked="" type="checkbox"/> STATUTORY NO-FAULT				EACH LOSS AGGREGATE (\$ (\$
A B	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY	WC542-6088 (CA) WC542-6089 (All States Except CA, TX) WC542-6090 (TX)	1/1/95	1/1/96	STATUTORY (\$ 500 (EACH ACCIDENT)
					(\$ 500 (DISEASE - POLICY LIMIT)
					(\$ 500 (DISEASE - EACH EMPLOYEE)
A B	AUTOMOBILE PHYSICAL DAMAGE	CA542 - 6086 (All States Except TX) CA542 - 6087 (TX)	1/1/95	1/1/96	(\$ 500 DEDUCTIBLE COMPREHENSIVE
					(\$ 500 DEDUCTIBLE COLLISION

DESCRIPTION OF OPERATIONS / LOCATION / VEHICLES / RESTRICTIONS / SPECIAL ITEMS

Ref: Contract No. DACA09-94-C-0087, Project Nos. 933008A and 9330080
Crash Fire Training Facility, Nellis Air Force Base, Nevada

COPY

CERTIFICATE HOLDER

Department of the Army
Los Angeles District
Corps of Engineers
P.O. Box 2711
Los Angeles, CA 90053-2325

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL SEND BY MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, ~~AND FURNISH TO THE CERTIFICATE HOLDER A COPY OF THE POLICY~~

AUTHORIZED REPRESENTATIVE

J. H. Scheider

APPENDIX A

RESUMES

STEVE M. AMAN, P.E.
President and Principal

PROFESSIONAL EXPERTISE

Mr. Aman has extensive experience in the general engineering and construction industry. Over the past 15 years, his diversified construction background was gained with a commitment to "value engineering construction." Mr. Aman has been directly responsible for all phases of civil and remedial construction activities including mass grading, demolition works, installation of storm drains, sewers, water lines, fine grade, base and paving projects, UST removals, bioremediation; load, haul & dispose of hazardous materials, landfill closures, industrial plant closures, decontamination of facilities and materials recycling.

As president of Aman Environmental Construction, he is responsible for the overall management of general construction and remediation activities associated with over 300 successfully completed projects.

RELATED PROJECT EXPERIENCE

- Representative projects for which he was responsible for overall management of general construction, demolition and excavation activities include:

- ▶ **Industrial Plant Closure, Ford Motor Land Development**

Scope of work includes asbestos abatement of 15 building structures, removal of regulated wastes such as mercury vapor lites, fluorescent lights, PCB transformers, power blast PCB stained concrete, cleaning of industrial piping and sewer lines, purge and drain all systems. Demolition of 1.2 million sf. of industrial and office building structures which include salvage of ferrous and non ferrous materials, removal and disposal of organic debris, removal and recycling of 85,000 tons of concrete and asphalt materials, removal of the underground utilities, excavation of contaminated soil after demolition, backfill and compaction of excavations, mass grade the entire site with movement of over one million cubic yards of earth material, fine grade the entire site for residential lots.

- ▶ **Lead Catalyst Removal, Shell Guam**

Scope of work consists of identifying and removal of buried spent catalyst disposed of at a refinery hardfill area. Material was disposed of along with miscellaneous steel scrap and debris generated from general operations. Catalyst materials were removed, separated, containerized, shipped and disposed of at a Class I landfill. Lead material was stabilized by the landfill operator before placement. Asbestos containing material's encounter was also packaged and disposed of at the Class I facility.

- ▶ **Ordnance Removal, Aerojet GenCorp**

Scope of work included locating and removal of live ordnance and miscellaneous sharp metal from a testing and disposal area used by Aerojet in Chino Hills, Ca., 215,000 cy. of soil contaminated with ordnance was excavated and processed using screening equipment whereby all ordnance greater than one inch was removed and disposed of. Live ordnance was detonated onsite. Contaminated soil from a burn pit area was also located, removed and disposed of off site. Entire area was backfilled and certified to 90% relative compaction with erosion control designed and constructed in place.

- ▶ **Bioremediation Project, Marathon Oil Company**

Scope of work consists of bioremediation of 100,000 tons of contaminated soil for Marathon Oil company in Kenai Alaska. Treatment cell was designed and constructed upon approval of design by Alaska Department of Conservation, construction completed with material excavated, screened to 4 inch minus, placed into the treatment cell, and then bioremediated to required action levels. Materials were then removed from the treatment cell after certified clean, hauled and placed at the

excavation site from which they originated.

► **Industrial Plant Closure, Honeywell Inc.**

Project consisted of an industrial plant closure in Gardena, Ca., including demolition and land clearing of a 15-acre industrial plant. A 300,000 sf. manufacturing plant was demolished, asbestos materials removed, PCB ballasts and fluorescent lights removed and packaged for disposal, 25,000 tons of concrete and asphalt pavement recycled and sold as recycled base material, five USTs' cleaned and removed, 35,000 tons of contaminated materials excavated and disposed of off site, excavations backfilled and compaction certified, import 35,000 tons of clean fill, and mass grade the entire site.

► **Demolition Project, American Honda Motor Corporation**

Scope of work consisted of the removal of all buildings and foundations associated with the 100-acre U.S. Steel Foundry in Torrance, Ca. , 60,000 cy. of structural concrete foundations removed, two million tons of street slag removed and recompactd, 250,000 tons of slag base produced, 100,000 tons of crushing and recycling of concrete into road base material, the entire site graded for future headquarters for American Honda Motor Corporation.

► **Demolition Project, Trammell Crow Company**

Scope of work consisted of the demolition and clearing of a 100-acre site operated by the U.S. Steel Foundry in Commerce, Ca., removal of 100,000 cy. of concrete foundations, mass grade site for industrial complex consisting of over two million sf. of new construction, installation of all new roads, parking areas, underground improvements complete.

► **Industrial Plant Closure, Anchor Glass Container Corporation**

Project consisted of an industrial plant closure in Vernon, Ca. including demolition and associated environmental remediation to obtain regulatory agency site closure. Demolition consisted of over 400,000 sf. of miscellaneous concrete, steel and brick construction, decontamination of high pH batch materials from existing silos', excavation and removal of hydrocarbon contaminated soil, transportation and off site disposal of over 10,000 tons of hazardous materials, backfill and compact all excavations, import of clean fill and finish grade the entire site.

► **Demolition Project, Armco Steel**

Scope of work consisted of the demolition of the Armco Steel Foundry, a 30-acre site used for foundry and warehouse purposes. Buildings demolished consisted of 850,000 sf. of large steel framed structures, removal of 50,000 cy. of concrete foundations, crush and recycle concrete as asphalt pavement materials for use as road base material, removal of all underground utilities, mass grade the entire site.

► **Demolition Project, Watt Development Company**

Scope of work involved demolishing foundations associated with a chemical refinery once owned by the Union Carbide Refinery in Torrance, Ca.

► **Demolition Project, Bowers Perez Development Company**

Scope of work consisted of the demolition and site clearance of over 17 acres which housed the Laura Scudders Food Processing Plant in Anaheim, Ca.

► **Bioremediation Project, Texaco**

Scope of work consisted of design and construction of bioremediation cell, excavation and removal of 100,000 cy of petroleum contaminated soil, placement and bioremediation of soil to predetermined action levels, placement and compaction of clean soil into areas from which they were excavated.

ACADEMIC BACKGROUND

- ▶ B.S., Civil Engineer (1979), California State Polytechnic University, Pomona, CA

CERTIFICATIONS

- ▶ 40 Hour Hazardous Waste Operation/Emergency Response, 1989
- ▶ 8 Hour Hazardous Waste Operations Refresher, 1995
- ▶ Medic First Aid, 1991

PROFESSIONAL AFFILIATIONS

- ▶ Professional Engineer, California: No. 34281
- ▶ Licensed Contractor with the following States:
 - California*
 - General Engineering - Class A No. 671303
 - Demolition and Land Clearing - Class 21
 - Hazardous Substance Removal - Class HAZ
 - Asbestos Certification
 - Alaska*
 - General Contractor - No. 21808
 - Arizona*
 - General Engineering - Class A No. 101177
 - Hawaii*
 - General Engineering - Class A & C No. AC-18990
 - Nevada*
 - General Engineering - Class A No. 0037836
 - Oregon*
 - General Contractor/All Structures No. 095938
 - Washington*
 - Construction Contractor General No. AMANECI077QE
 - Government of Guam*
 - Class C-11 & C-68 (Remediation) No. 6430

JOHN D. FARMER
Project Manager/Estimator

PROFESSIONAL EXPERTISE

- Over twelve years experience in the environmental field including:
 - ▶ Estimating, bid proposal development
 - ▶ Profiling procedures and transportation
 - ▶ Wastestream evaluation and classification
 - ▶ Permitting
 - ▶ Governmental and regulatory interface
- Project management responsibilities for remediation projects consisting of UST removals, soil excavation, infill and grading, handling and disposal of various regulated building materials (PCB's, heavy metals, radioactive items) drummed liquids and soil cuttings.
- Evaluations and coordination of drummed liquids and soils.

RELATED PROJECT EXPERIENCE

- In his present position, Mr. Farmer's responsibilities include estimating, bid development, profiling and related customer service and agency interface. In addition, Mr. Farmer provides overall project management for various remediation projects such as coordinating the removal and disposal/recycling of State and Federally regulated building materials and wastes. Other project experience includes labpacking, drum work, underground storage tanks (UST) removals, excavation, infill and grading. A selection of projects for which Mr. Farmer has provided various project management and coordination responsibilities include:
 - ▶ Demolition project for Silicon Systems, Inc.
Scope of work involved the evaluation and decontamination of several poisonous process gases and acids utilized in the research and development and manufacturing of semi-conductors. Impacted areas consisted of gas cabinets, and associated process lines (stainless, plastic) acid and hydrofluoric (HF) waste lines, solvent and HF underground storage tanks, and miscellaneous storage tanks. Decontamination of the facility exhaust scrubber system, handling low pH and heavily impacted ducting with arsenic interior and exterior demolition of various support equipment (i.e., boilers, cooling towers, baghouse) and below grade concrete foundations.
 - ▶ Demolition project for Ford Motor Company
Environmental aspects include removal of 43 miles of florescent light tubes and associated PCB containing light ballasts, handling of low/high voltage radioactive smoke detectors, recycling of mercury containing electrical equipment and various lead acid and ni-cad emergency lights and batteries. Decontamination was conducted on PCB and Non-PCB contaminated surfaces by utilizing high pressure cleaning or scarification operations. All generated fluids and solids were containerized and evaluated for on-site or off-site disposal.
 - ▶ Industrial Plant Closure project for Anchor Glass Container.
Project consisted of an industrial plant closure in Vernon, Ca. including demolition and associated environmental remediation to obtain regulatory agency site closure.
 - ▶ Industrial Plant Closure project for Honeywell, Inc.
Project consisted of an industrial plant closure in Gardena, Ca. including demolition and environmental remediation. Environmental aspects included the handling, drumming of over 50 drums of PCB ballast, incineration of RCRA F-listed impacted soils and over 15 miles of florescent light tubes.

- ▶ Demolition project for Stroh Brewery Company.
Project consisted of the demolition and removal of various buildings including all slabs and footings at the 47.5 acre Brewery in Van Nuys, Ca.
- ▶ Industrial plant closure project for Peerless Pump Company.
Demolition and environmental remediation of former foundry facility occupying 3.75 acres in Vernon, Ca. Contaminants at site include asbestos, RCRA and Non-RCRA hazardous waste solids containing heavy metals, polynuclear aromatics, and solvents. Conducted UST removal activities.
- ▶ CAMSCO Foundry, Inc., West Covina, Ca.
Excavation and Chemical Fixation (on-site) of approximately 3,000 cubic yards of heavy metal contaminated foundry sand. Confirmatory sampling and analysis. Transportation and Disposal of treated material to an approved landfill facility. Backfill and restoration to existing paved condition.
- ▶ Anderson Lithograph Company, Inc., Commerce, Ca.
Completion of a Phase II drilling assessment program. Removal of various chemical underground storage tanks. Backfill and restoration to existing paved condition. Obtained clean closure of the site from Los Angeles County, Department of Public Works.
- ▶ Champion Products, Inc., Commerce, Ca.
Excavated and stockpiled 200 tons of halogenated solvent contaminated soils removed from within an operating production facility. Transportation and disposal of soil to an approved Class I landfill. Backfilled the excavation by sand-slurry and replacement of concrete floor to existing condition.
- ▶ Xerox Corporation, Fremont, Ca.
Excavated into groundwater and stockpiled 3000 tons of hydrocarbon contaminated soils and transported for disposal at a local Class III disposal facility. Placement of a filter fabric covering the sides and bottom of the excavation. Backfilled the excavation with import material to existing grade as required by the Regional Water Quality Control Board specifications. Replacement of asphalt to existing grade, striping, irrigation, and landscaping. All work was completed under the direction of Woodward-Clyde Consultants
- ▶ Hughes Market, Inc., Irwindale, Ca.
Excavated, screened, and stockpiled 1800 tons of hydrocarbon contaminated soil and transported for disposal at a Class III and Class II disposal facility. Regional Water Quality Control Board interfacing with respect to soil disposal. Backfilled the excavation with on-site material to allow for future remediation activities. All work was completed in conjunction with Woodward-Clyde Consultants.

ACADEMIC BACKGROUND

- ▶ A.S., Environment & Botany, Bakersfield College, Bakersfield, CA
- ▶ Environmental Curriculum, California State Polytechnic University, Pomona, CA

CERTIFICATIONS

- ▶ 40 Hour Hazardous Waste Operations Training, 1989
- ▶ 8 Hour HAZWOPER Refresher, 1995
- ▶ Hazards and Protection Limited, 1988
- ▶ 4 Hour OSHA Excavation/Trenching Course, 1995
- ▶ 4 Hour OSHA Confined Space Entry Course, 1995
- ▶ Hazardous Materials Transportation Course, 1995

PROFESSIONAL AFFILIATIONS

- ▶ Hazardous Waste Association of California
- ▶ Association of Hazardous Waste Professionals

DARREL E. LEWIS

Corporate Health & Safety Coordinator

PROFESSIONAL EXPERTISE

Mr. Lewis is a professional Health & Safety Coordinator with over 10 years experience working in the environmental services field. Mr. Lewis is experienced in all facets of worker safety, emergency response, Quality Assurance / Quality Control, and environmental / regulatory compliance.

ENVIRONMENTAL SERVICES

- ▶ Environmental Management
- ▶ Pollution Prevention Programs
- ▶ Landfill Maintenance and Operation
- ▶ Soil Sampling and Monitoring
- ▶ Emergency Response Team
- ▶ Worker Safety
- ▶ Environmental Compliance
- ▶ Hazardous Waste Hauling, Storage and Disposal
- ▶ Quality Assurance / Quality Control
- ▶ Wastewater Treatment
- ▶ MSDS Maintenance
- ▶ Waste Reduction Coordination
- ▶ Personal Protective Equipment
- ▶ Exposure Monitoring

ADMINISTRATION & MANAGEMENT

- ▶ Supervisor
- ▶ Public Relations
- ▶ Office Management
- ▶ Health & Safety Training
- ▶ Regulatory Agency Liaison
- ▶ Environmental Compliance Reports
- ▶ Permit Review, Maintenance and Coordination
- ▶ Administer Drug & Substance Abuse Program
- ▶ Accident Review
- ▶ Maintain OSHA 200 Log

Mr. Lewis serves as AECT's Health & Safety Manager. He also coordinates all Health & Safety issues within the company, writes or review site specific Health & Safety Plans. Review and update all regulatory programs, review all accidents and maintain OSHA 200 log. When requested completes prequalification packages for jobs that will be bid on. Conduct safety meetings and training for all project management. Administer the corporate Drug and Substance Abuse Program. Maintains company's Material Safety Data Sheet files (MSDS). Conduct site audits, maintains company-wide medical surveillance program and personnel training certification is up to date.

RELATED PROJECT EXPERIENCE

General Dynamics, Kearny Mesa Facility, Plant Closure, San Diego, CA: Demolition of all existing buildings, structures, water tower, microwave antenna, utility removal, removal of asphalt roads and parking areas, and concrete foundations as designated in Phase IA. Responsible for the development of a Health & Safety Plan, site audits, conducting safety meetings, ensuring worker safety, and coordination of worker health and safety with Certified Industrial Hygienist. Audit work being completed by subcontractors on-site.

Ford Motor Land, Facility Closure, Newport Beach, CA: Demolition of all existing buildings, structures, associated underground utilities, utility removal, and mass grading of site. Responsible for site audits, inspection of work being accomplished. Verify work is being done in accordance with the Health & Safety plan and in compliance with State and Federal regulations.

Silicon Systems, Demolition and Environmental Cleanup, Tustin, CA: Develop a Health & Safety plan for site activities that included demolition of walls and ceiling on interior of building and removal of plumbing, in ground clarifier, and underground storage tanks containing solvent. Responsible for site audits, inspection of work being completed in accordance with the Health & Safety plan, in compliance with State and Federal regulations.

Route 280, Freeway Demolition, San Francisco, CA: Developed a Health & Safety plan for the freeway removal including concrete super-structures, caps, and columns. Responsibilities included performing periodic site audits and inspections of work being completed.

City Hall, Seismic Retrofit and Earthquake Repair, San Francisco, CA: Site activities for the seismic retrofit included demolition of basement floors, walls, and ceiling and removal of cement from building steel beams in the basement. Developed Health & Safety plan, completed chemical inventory and established MSDS book. Responsible for interface with main contractor safety personnel to ensure compliance with regulations. Established a medical surveillance program for lead exposure and reviewed analysis on personal monitoring. Currently completed site audits, review training records, plans and site inspection of work being performed.

Site Safety Officer, Underground Tank Removals, Edwards AFB, CA: Review site specific health & safety plan and OSHA regulations to insure that our employees and our subcontractors are complying with all requirements. Conducts daily safety meetings, perform air monitoring for employee exposure, order Personal Protective Equipment and file all necessary reports. Address all Health & Safety issues, establish and maintain MSDS book and research regulations to maintain compliance. Deal directly with the Army Corps of Engineers, Base Environmental Health & Safety Personnel and Kern County Environmental Health Specialist.

Environmental Compliance Specialist, Hartwell Corporation, Rancho Cucamonga, CA: Responsible for all hazardous materials management, environmental compliance, health & safety training of workers, pollution prevention programs, liaison with all regulatory agencies. Reviewed, coordinated and maintained all permits for the manufacturing facility. Responsible for the review of employees exposure to chemicals and provided the proper personal protective equipment. Member of the safety committee and conducted periodic facility inspections, updated and maintained compliance reports and plans.

Environmental Intern, City of Anaheim, Public Utilities Department, Anaheim, CA: Responsible for providing assistance to business' in Anaheim that had specific regulatory questions. Also developed checklists, compliance manual and work shops addressing specific issues and topics. Researched new regulations and wrote articles for Safety Business Newsletter.

Waste Inspector, Orange County Integrated Waste Management Department, Santa Ana, CA: Responsible for all environmental concerns at the county sanitary landfill. Duties required dealing directly with parties disposing of refuse, making sure no illegal substances were being dumped. Maintained a hazardous waste storage area. Responsible to be the first responder to all incidents at the landfill. Responsible for all health & safety concerns to the general public and the employees.

Hazardous Waste Inspector/Assembly Mechanic - Loral Aeronautics, Newport Beach, CA: Responsible for work oversight in two departments including: assigning job tasks, maintaining product quality, maintaining a safe work area with the proper storage and handling of hazardous materials and waste. Member of the safety committee who conducted periodic facility inspections.

Health & Safety Supervisor, Ford Aerospace Corporation, Newport Beach, CA: Responsible for health & safety oversight to include: the review and inspection of safe work practices to ensure compliance with all regulations and OSHA requirements, and the maintenance and review of all employee accident reports.

Health & Safety Supervisor, Martin Decker Company, Santa Ana, CA: Responsible for health & safety oversight to include the review and inspection of safe work practices to ensure compliance with all regulations and OSHA requirements, maintenance and review of all employee accident reports, employee health & safety training.

ACADEMIC BACKGROUND

- ▶ A.A., Environmental Hazardous Materials Technology (1992), Fullerton College, CA
- ▶ Business Administration Course Work (1988-1990), Fullerton College, CA
- ▶ Industrial Waste Worker Certificate Program, University of California Irvine, CA (Pending)
- ▶ Industrial Hygiene Sampling & Instrumentation (1995), University of California Irvine, CA
- ▶ OSHA Training Institute, OSHA #521, OSHA Guide to Industrial Hygiene, University of California San Diego, CA

CERTIFICATIONS

- ▶ 40-Hour Hazardous Waste Operations Training, 1993
- ▶ 8-Hour HAZWOPER Refresher, Nov. 1994
- ▶ 24-Hour Hazardous Materials Awareness & Safety, 1992
- ▶ First-Aid / CPR, 1994

PROFESSIONAL EXPERTISE

Mr. Mott has over 20 years experience estimating and managing various types of demolition projects. He has provided on-site management and coordination for major projects including subcontractor procurement and coordination, planning and supervision of work activities, and health and safety monitoring.

RELATED PROJECT EXPERIENCE

- **Demolition, Ford Motor Land Development, Newport Beach, CA**
Superintendent responsible for the coordinating and planning work activities, procure men and equipment, monitor work area safety, track job costs and improve operational methods, communicate changed conditions to project manager and coordinate subcontractors activities. Scope of work includes asbestos abatement of 15 building structures, removal of regulated wastes such as mercury vapor lites, fluorescent lights, PCB transformers, power blast PCB stained concrete, cleaning of industrial piping and sewer lines, purge and drain all systems. Demolition consists of 1.2 million sf. of industrial and office building structures which include salvage of ferrous and non ferrous materials, removal and disposal of organic debris, removal and recycling of 85,000 tons of concrete and asphalt materials, removal of the underground utilities, excavation of contaminated soil after demolition, backfill and compaction of excavations, mass grade the entire site with movement of over one million cubic yards of earth material, fine grade the entire site for the construction of approximately 500 luxury homes.
- **Inland Contractors, Bloomington, CA**
Superintendent/Estimator
Provided administrative and operational management support to all aspects of PublicWorks construction projects involving street reconstruction and construction of water, sewer and storm drain systems. Position entails full profit/loss responsibility for all specification reviews, project estimating, preparation of bids/proposals, budgeting/forecasting, contract negotiations, procurement of permits, personnel recruitment, on-site supervision, and maintaining quality assurance of projects and timely completions. Act as liaison with related Municipal/Government officials, inspectors and utility companies.
Project Involvement: Small and large city/county public works projects in Orange, Riverside, San Bernardino and Los Angeles Counties.
- **J.E.G. Construction, Pomona, CA**
Project Foreman/Superintendent
A reputable construction firm specializing in major municipal and county public works projects, directed all on-site construction activities involving removal and replacement of storm drain facilities, concrete and asphalt pavement, street reconstruction, and construction of water and waste management systems. Coordinated subcontractor scheduling, conducted quality inspections, prepared reports for corporate offices, and acted as liaison with contract representative and public agencies.
Project Involvement: Numerous major Public Works projects including the \$4 million, City of Cerritos contract for reconstruction of Artesia Blvd.
- **Aman Bros., Inc., Covina, CA**
General Superintendent
Coordinated and directed Project Superintendent and Foreman staffs for up to ten public and private construction/reconstruction projects simultaneously. Position required extensive proficiencies in coordinating and scheduling of projects to maximize efficient use of men and equipment. Interfaced with customers and public agencies to ensure conformance to contract requirements. Additional responsibilities included job costing, project safety, code conformance, inspector relations, ensuring timely material deliveries, and assisting with project estimating.

ACADEMIC BACKGROUND

- ▶ General Education

CERTIFICATIONS

- ▶ 40 Hour HAZWOPER Training, 1995
- ▶ CAL-OSHA Trenching and Excavation Standards of California, 1993

RON SPENCER III
Project Manager/Estimator

PROFESSIONAL EXPERTISE

Mr. Spencer has over eight years of project management experience in the construction industry. Areas of expertise include estimating, project scheduling and cost control, as well as project development and coordination for demolition projects.

RELATED PROJECT EXPERIENCE

- **Industrial Plant Closure**
Project Manager/Estimator, Ford Motor Land Development, Newport Beach, CA
Responsible for the coordination and supervision of all hazardous waste and decontamination services, asbestos abatement, mass demolition and rough grading of a 100-acre site. Scope of work includes asbestos abatement of 15 building structures, removal of regulated wastes such as mercury vapor lites, fluorescent lights, PCB transformers, power blast PCB stained concrete, cleaning of industrial piping and sewer lines, purge and drain all systems. Demolition consists of 1.2 million sf. of industrial and office building structures which include salvage of ferrous and non ferrous materials, removal and disposal of organic debris, removal and recycling of 85,000 tons of concrete and asphalt materials, removal of the underground utilities, excavation of contaminated soil after demolition, backfill and compaction of excavations, mass grade the entire site with movement of over one million cubic yards of earth material, fine grade the entire site for the construction of approximately 500 luxury homes.
- **Asbestos Management**
Los Angeles County Sheriff Dept., Various Locations, CA
Responsible for the coordination and supervision of all asbestos abatement removal at various Los Angeles County Sheriff Stations and Court Houses.
- **Demolition Project**
Mobil Oil Corporation, Torrance, CA
Responsible for the coordination and supervision for the demolition of the former Coke plant area located at the Mobil Oil Corporation's Torrance Refinery. Was trained and certified through the Mobil Oil Health & Safety course.
- In Mr. Spencer's responsibilities include project management, sales, marketing research, permit coordination, demolition project development, coordination and estimating.
- A total of five years experience providing project management, cost control, scheduling; planning and direct contact and interaction with owners, developers, City, County and State officials for Aman Brothers General Engineering.

A selection of the projects totaling over \$15 million in general construction include:

- ▶ Demolition of the seven acre Lancer Facility in Los Angeles, Ca.
- ▶ John Alexander Project in El Monte, Ca.
Concrete demolition, over excavation, cut to fill, paving and paving subgrade.
- ▶ Trammell Crow, Company, Santa Fe Springs, Ca.
Excavation of approx. 1,000,000 sf., underground utilities, load and haul of 14,000 +/- tons of base material, concrete and asphalt construction.

- ▶ Project for City of Industry, City of Industry, Ca.
Clearing, on-site removals, installation of pre-cast girders and new bridge construction, paving and grading.
- ▶ Other projects for J.A. Alexander, Catellus Development and Trammel Crow, Co. totaling \$8.5 million dollar include project consisting of grading, paving, underground utilities, concrete improvements, electrical, landscaping and landscape irrigation, construction of masonry and block retaining walls, installation of G.T.E, & Edison conduits/structures, striping and sandblasting, storm drain structures, asphalt grinding and cold planning and contract closeouts.

ACADEMIC BACKGROUND

- ▶ Business Management/Public Relations (1988), Mount San Antonio College, Walnut, CA
- ▶ Business Management/Administration (1989), Pasadena City College, Pasadena, CA
- ▶ Business Management/Administration (1993), Orange Coast College, Costa Mesa, CA

CERTIFICATIONS

- ▶ 40 Hour OSHA Health and Safety Training, 1989
- ▶ 8 Hour Refresher Health and Safety Training, 1995
- ▶ Asbestos Emissions Demo/Renovation Activities Compliance, 1993

APPENDIX B

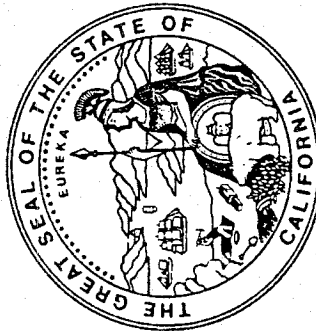
Contractor's License

State of California

Contractors State License Board

Pursuant to Chapter 9 of Division 3 of the Business and Professions Code
and the Rules and Regulations of the Contractors State License Board,
the Registrar of Contractors does hereby issue this license to:

AMAN ENVIRONMENTAL CONSTRUCTION INC



to engage in the business or act in the capacity of a contractor

in the following classification(s):

A - GENERAL ENGINEERING CONTRACTOR
C21 - BUILDING MOVING, WRECKING
ASB - ASBESTOS
HAZ - HAZARDOUS SUBSTANCES REMOVAL

Witness my hand and seal this day,
May 17, 1993

Issued May 14, 1993

Steve M. L...

Signature of Licensee

Steve M. L...

Signature of License Qualifier

This license is the property of the Registrar of Contractors, is not
transferable, and shall be returned to the Registrar upon demand
when suspended, revoked, or invalidated for any reason. It becomes
void if not renewed.

Daniel R. Phillips

Registrar of Contractors

671303

License Number

